



DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

50 CFR Part 17

[Docket Nos. FWS–R4–ES–2017–0061 and FWS–R4–ES–2020–0137; FF09E2100
FXES11110900000 212]

RIN 1018-BC14; 1018-BD50

Endangered and Threatened Wildlife and Plants; Threatened Species Status, Section 4(d) Rule, and Designation of Critical Habitat for Panama City Crayfish

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Proposed rule; reopening of comment period and announcement of public hearing.

SUMMARY: We, the U.S. Fish and Wildlife Service (Service), reopen the public comment period on the proposed rule to list the Panama City crayfish (*Procambarus econfinae*) as a threatened species under the Endangered Species Act of 1973, as amended (Act); propose a rule issued under section 4(d) of the Act (“4(d) rule”) for the species; and propose to designate critical habitat for the Panama City crayfish under the Act. In total, approximately 7,177 acres (2,904 hectares) in Bay County, Florida, fall within the boundaries of the proposed critical habitat designation, all of which are currently occupied by the species. We also announce the availability of a draft economic analysis (DEA) for the proposed designation of critical habitat for the Panama City crayfish. We will accept comments on the proposed listing, 4(d) rule, and critical habitat designation, as well as the draft economic analysis, during the open comment period. Finally, we announce a public informational meeting and public hearing on the proposed listing rule and this proposed rule.

DATES: *Written comments:* The comment period on the proposed rule that published January 3, 2018 (83 FR 330), is reopened. We will accept comments on that proposed rule, as well as the new proposals described in this document, that are received or postmarked on or before [INSERT DATE 60 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]. Comments submitted electronically using the Federal eRulemaking Portal (see **ADDRESSES**, below) must be received by 11:59 p.m. Eastern Time on the closing date.

Public informational meeting and public hearing: We will hold a public informational meeting on May 4, 2021, from 6 p.m. to 7:30 p.m., Central Time, followed by a public hearing from 7:30 p.m. to 8:30 p.m., Central Time.

ADDRESSES: You may submit comments on the proposed rules or draft economic analysis by one of the following methods:

(1) *Electronically:* Go to the Federal eRulemaking Portal:

<http://www.regulations.gov>. In the Search box, enter Docket No. FWS–R4–ES–2017–0061 for the proposed listing, or FWS–R4–ES–2020–0137 for the proposed 4(d) rule and critical habitat designation (including the associated draft economic analysis), which are the docket numbers for the rulemakings. Then, click on the Search button. On the resulting page, in the Search panel on the left side of the screen, under the Document Type heading, check the Proposed Rule box to locate the correct document. You may submit a comment by clicking on “Comment Now!”

(2) *By hard copy:* Submit by U.S. mail to: Public Comments Processing, Attn: [Docket No. FWS–R4–ES–2017–0061 for the proposed listing, or FWS–R4–ES–2020–0137 for the proposed 4(d) rule and critical habitat designation (including the associated draft economic analysis)], U.S. Fish and Wildlife Service, MS: PRB/3W, 5275 Leesburg Pike, Falls Church, VA 22041–3803.

We request that you send comments only by the methods described above. We

will post all comments on <http://www.regulations.gov>. This generally means that we will post any personal information you provide us (see **Information Requested**, below, for more information).

Public informational meeting and public hearing: The public informational meeting and the public hearing will be held virtually using the Zoom platform. See *Public Hearing*, below, for more information.

Availability of supporting materials: For the proposed critical habitat designation, the shapefiles from which the maps are generated are included in the administrative record and are available at <http://www.regulations.gov> under Docket No. FWS–R4–ES–2020–0137. Any additional tools or supporting information that we may develop for the critical habitat designation may also be included in the preamble and/or at <http://www.regulations.gov>.

FOR FURTHER INFORMATION CONTACT: Jay Herrington, Field Supervisor, U.S. Fish and Wildlife Service, Florida Ecological Services Field Office, 1601 Balboa Avenue, Panama City, FL 32405; telephone 904–731–3191; facsimile 904–731–3045. If you use a telecommunications device for the deaf (TDD), call the Federal Relay Service at 800–877–8339.

SUPPLEMENTARY INFORMATION:

Executive Summary

Why we need to publish a rule. Under section 4(d) of the Act, whenever any species is listed as a threatened species, we are required to issue any regulations deemed necessary and advisable to provide for the conservation of such species. Also, any species that is determined to be endangered or threatened under the Act requires critical habitat to be designated, to the maximum extent prudent and determinable. The Panama City crayfish is proposed as a threatened species under the Act, and this document proposes regulations we deem necessary and advisable under section 4(d) of the Act, and also

proposes to designate critical habitat. Designations and revisions of critical habitat can only be completed by issuing a rule. In light of the time that has passed since the publication of the proposed listing rule and the receipt of new scientific information, we are also reopening the comment period for the proposed listing rule.

What this document does. We are concurrently reopening the comment period for the proposed listing rule, proposing a 4(d) rule, and proposing to designate critical habitat for the Panama City crayfish. A draft economic analysis on impacts expected from the critical habitat proposal is also available.

The basis for our action. Under the Act, we may determine that a species is an endangered or threatened species because of any of five factors: (A) The present or threatened destruction, modification, or curtailment of its habitat or range; (B) overutilization for commercial, recreational, scientific, or educational purposes; (C) disease or predation; (D) the inadequacy of existing regulatory mechanisms; or (E) other natural or manmade factors affecting its continued existence. Our proposed rule identified habitat loss and fragmentation from development (Factor A) as a primary threat to the Panama City crayfish, making the species warranted for protection as a threatened species under the Act.

The Act provides a specific list of prohibitions for endangered species under section 9, but the Act does not automatically extend these same prohibitions to threatened species. Under section 4(d), the Act instructs the Secretary of the Interior (Secretary) to issue any protective regulations deemed necessary and advisable for the conservation of threatened species. It also indicates the Secretary may extend some or all of the prohibitions in section 9 to threatened species. We are proposing a 4(d) rule that specifically tailors measures that provide for the conservation of the Panama City crayfish.

Section 4(a)(3) of the Act requires the Secretary to designate critical habitat

concurrent with listing to the maximum extent prudent and determinable. Section 3(5)(A) of the Act defines critical habitat as (i) the specific areas within the geographical area occupied by the species, at the time it is listed, on which are found those physical or biological features (I) essential to the conservation of the species and (II) which may require special management considerations or protections; and (ii) specific areas outside the geographical area occupied by the species at the time it is listed, upon a determination by the Secretary that such areas are essential for the conservation of the species. Section 4(b)(2) of the Act states that the Secretary must make the designation on the basis of the best scientific data available and after taking into consideration the economic impact, the impact on national security, and any other relevant impacts of specifying any particular area as critical habitat.

We prepared an economic analysis of the proposed designation of critical habitat.

In order to consider economic impacts, we prepared an analysis of the economic impacts of the proposed critical habitat designation. We hereby announce the availability of the draft economic analysis and seek public review and comment.

Peer review. In accordance with our joint policy on peer review published in the *Federal Register* on July 1, 1994 (59 FR 34270), and our August 22, 2016, memorandum updating and clarifying the role of peer review of listing actions under the Act, we sought the expert opinions of nine appropriate specialists regarding version 1.1 of the species status assessment (SSA) report, and four appropriate specialists regarding version 2.0 of the SSA report. We received responses from four specialists for each version (total of eight peer reviews), which informed this proposed rule. The purpose of peer review is to ensure that our listing determinations, critical habitat designations, and 4(d) rules are based on scientifically sound data, assumptions, and analyses. The peer reviewers have expertise in the species' biology, habitat, and response to threats.

Information Requested

We intend that any final action resulting from this proposed rule will be based on the best scientific and commercial data available and be as accurate and as effective as possible. Therefore, we request comments or information from other government agencies, Native American Tribes, the scientific community, industry, or any other interested party concerning this proposed rule. We particularly seek comments concerning:

(1) The historical and current status and distribution of the Panama City crayfish, its biology and ecology, specific threats (or lack thereof) and regulations that may be addressing those threats and ongoing conservation measures for the species and its habitat.

(2) Information relevant to the factors that are the basis for making a listing determination for a species under section 4(a) of the Act, which are:

(a) The present or threatened destruction, modification, or curtailment of the species' habitat or range;

(b) Overutilization for commercial, recreational, scientific, or educational purposes;

(c) Disease or predation;

(d) The inadequacy of existing regulatory mechanisms; or

(e) Other natural or manmade factors affecting its continued existence and threats to the species or its habitat.

(3) The reasons why we should or should not designate habitat as "critical habitat" under section 4 of the Act (16 U.S.C. 1531 *et seq.*), including information to inform the following factors that the regulations identify as reasons why designation of critical habitat may be not prudent:

(a) The species is threatened by taking or other human activity and identification of critical habitat can be expected to increase the degree of such threat to the species;

(b) The present or threatened destruction, modification, or curtailment of a species' habitat or range is not a threat to the species, or threats to the species' habitat stem solely from causes that cannot be addressed through management actions resulting from consultations under section 7(a)(2) of the Act;

(c) Areas within the jurisdiction of the United States provide no more than negligible conservation value, if any, for a species occurring primarily outside the jurisdiction of the United States; or

(d) No areas meet the definition of critical habitat.

(4) Specific information on:

(a) The amount and distribution of Panama City crayfish habitat;

(b) What areas, that are occupied at the time of listing and that contain the physical or biological features essential to the conservation of the species, should be included in the designation and why;

(c) Special management considerations or protection that may be needed in critical habitat areas we are proposing, including managing for the potential effects of climate change;

(d) What areas not occupied at the time of listing are essential for the conservation of the species and why;

(e) Information about conservation efforts that may affect proposed critical habitat areas; and

(f) Information about the proposed 100-meter (328-foot) buffer within secondary soils, and whether we should consider increasing or decreasing that buffer.

(5) Land use designations and current or planned activities in the subject areas and their possible impacts on proposed critical habitat.

(6) Information on the projected and reasonably likely impacts of climate change on the Panama City crayfish and proposed critical habitat.

(7) Any probable economic, national security, or other relevant impacts of designating any area that may be included in the final designation, and the benefits of including or excluding specific areas.

(8) Information on the extent to which the description of probable economic impacts in the draft economic analysis is a reasonable estimate of the likely economic impacts and the description of the environmental impacts in the draft environmental assessment is complete and accurate, especially in light of impacts from Hurricane Michael in October 2018.

(9) Whether any specific areas we are proposing for critical habitat designation should be considered for exclusion under section 4(b)(2) of the Act, and whether the benefits of potentially excluding any specific area outweigh the benefits of including that area under section 4(b)(2) of the Act.

(10) Whether we could improve or modify our approach to designating critical habitat in any way to provide for greater public participation and understanding, or to better accommodate public concerns and comments.

(11) Information on regulations that are necessary and advisable to provide for the conservation of the Panama City crayfish and that the Service can consider in developing a 4(d) rule for the species. In particular, information concerning the extent to which we should include any of the section 9 prohibitions in the 4(d) rule or whether any other forms of take should be excepted from the prohibitions in the 4(d) rule.

Please include sufficient information with your submission (such as scientific journal articles or other publications) to allow us to verify any scientific or commercial information you include.

Please note that submissions merely stating support for, or opposition to, the action under consideration without providing supporting information, although noted, will not be considered in making a determination, as section 4(b)(1)(A) of the Act directs

that determinations as to whether any species is an endangered or a threatened species must be made “solely on the basis of the best scientific and commercial data available.” Comments previously submitted need not be resubmitted, as they will be fully considered in preparation of the final rule.

You may submit your comments and materials concerning this proposed rule by one of the methods listed in **ADDRESSES**. We request that you send comments only by the methods described in the **ADDRESSES**.

If you submit information via <http://www.regulations.gov>, your entire submission—including any personal identifying information—will be posted on the website. If your submission is made via a hardcopy that includes personal identifying information, you may request at the top of your document that we withhold this information from public review. However, we cannot guarantee that we will be able to do so. We will post all hardcopy submissions on <http://www.regulations.gov>.

Comments and materials we receive, as well as supporting documentation we used in preparing this proposed rule, will be available for public inspection on <http://www.regulations.gov>.

Because we will consider all comments and information we receive during the comment period, our final determinations may differ from this proposal. Based on the new information we receive (and any comments on that new information), we may conclude that the species is endangered instead of threatened, or we may conclude that the species does not warrant listing as either an endangered species or a threatened species. In addition, we may change the parameters of the prohibitions or the exceptions to those prohibitions if we conclude it is appropriate in light of comments and new information received. For example, we may expand the incidental-take prohibitions to include prohibiting additional activities if we conclude that those additional activities are not compatible with conservation of the species. Conversely, we may establish additional

exceptions to the incidental-take prohibitions in the final rule if we conclude that the activities would facilitate or are compatible with the conservation and recovery of the species. For critical habitat, our final designation may not include all areas proposed, may include some additional areas, and may exclude some areas if we find the benefits of exclusion outweigh the benefits of inclusion.

Public Hearing

We are holding a public informational meeting followed by a public hearing on the date and at the time listed in **DATES**. We are holding the public informational meeting and public hearing via the Zoom online video platform and via teleconference so that participants can attend remotely. For security purposes, registration is required. To listen and view the meeting and hearing via Zoom, listen to the meeting and hearing by telephone, or provide oral public comments at the public hearing by Zoom or telephone, you must register. For information on how to register, or if you encounter problems joining Zoom the day of the meeting, visit <http://www.fws.gov/panamacity>. Registrants will receive the Zoom link and the telephone number for the public informational meeting and public hearing. If applicable, interested members of the public not familiar with the Zoom platform should view the Zoom video tutorials (<https://support.zoom.us/hc/en-us/articles/206618765-Zoom-video-tutorials>) prior to the public informational meeting and public hearing.

We are holding the public informational meeting to present information about the January 3, 2018, proposed rule to list the Panama City crayfish as a threatened species (83 FR 330) and to provide interested parties an opportunity to ask questions about the proposed 4(d) rule and proposed designation of critical habitat. The public hearing will provide interested parties an opportunity to present verbal testimony (formal, oral comments) regarding the January 3, 2018, proposed rule to list the Panama City crayfish as a threatened species (83 FR 330), the proposed 4(d) rule, and the proposed designation

of critical habitat. While the public informational meeting will be an opportunity for dialogue with the Service, the public hearing is not: It is a forum for accepting formal verbal testimony. In the event there is a large attendance, the time allotted for oral statements may be limited. Therefore, anyone wishing to make an oral statement at the public hearing for the record is encouraged to provide a prepared written copy of their statement to us through the Federal eRulemaking Portal, or U.S. mail (see **ADDRESSES**, above). There are no limits on the length of written comments submitted to us. Anyone wishing to make an oral statement at the public hearing must register before the hearing (<http://www.fws.gov/panamacity>). The use of a virtual public hearing is consistent with our regulations at 50 CFR 424.16(c)(3).

Reasonable Accommodation

The Service is committed to providing access to the public informational meeting and public hearing for all participants. Closed captioning will be available during the public informational meeting and public hearing. Further, a full audio and video recording and transcript of the public hearing will be posted online at <http://www.fws.gov/panamacity> after the hearing. Participants will also have access to live audio during the public informational meeting and public hearing via their telephone or computer speakers. Persons with disabilities requiring reasonable accommodations to participate in the meeting and/or hearing should contact the person listed under **FOR FURTHER INFORMATION CONTACT** at least 5 business days prior to the date of the meeting and hearing to help ensure availability. An accessible version of the Service's public informational meeting presentation will also be posted online at <http://www.fws.gov/panamacity> prior to the meeting and hearing (see **DATES**, above). See <http://www.fws.gov/panamacity> for more information about reasonable accommodation.

Previous Federal Actions

All previous Federal actions are described in the proposal to list the Panama City crayfish as a threatened species under the Act published in the *Federal Register* on January 3, 2018 (83 FR 330).

Supporting Documents

A species status assessment (SSA) team prepared an SSA report for the Panama City crayfish. The SSA team was composed of Service biologists, in consultation with other species experts. The SSA report represents a compilation of the best scientific and commercial data available concerning the status of the species, including the impacts of past, present, and future factors (both negative and beneficial) affecting the species. The Service sent version 1.1 of the SSA report to nine independent peer reviewers and received four responses. The Service also sent the SSA report to two academic partners for review, and we received review from both partners. The Service sent version 2.0 of the SSA report to four peer reviewers and received four responses.

Background

It is our intent to discuss in this document only those topics directly relevant to the new scientific information procured and analyzed since the proposed listing rule's publication, in addition to discussing the proposed section 4(d) rule and designation of critical habitat for the Panama City crayfish. For more information on the Panama City crayfish generally, refer to the proposed listing rule published in the *Federal Register* on January 3, 2018 (83 FR 330). A thorough review of the taxonomy, life history, and ecology of the Panama City crayfish (*Procambarus econfinae*) is presented in the revised SSA report, version 2.0 (Service 2019).

Species Description

The Panama City crayfish is a small, semi-terrestrial crayfish that grows to about 2 inches (in) (50.8 millimeters (mm)) in length (minus claws), and is found in south-central Bay County, Florida. The species' color pattern consists of a medium dark-

brown background color, lighter brown mid-dorsal stripe, and darker brown dorsolateral stripes (FWC 2016, p. 1). The Panama City crayfish was first described by Hobbs in 1942 from Bay County, Panama City, Florida. Currently, the Panama City crayfish is classified in the family Cambaridae and is considered a valid taxon by the scientific community (Taylor et al. 1996, 2007; Integrated Taxonomic Information System 2017).

The life history of the Panama City crayfish specifically is not well known. Cambarid crayfish may live about 2.5 to 3 years (Hobbs 2001, p. 977), with a generation period of 2 years. For this family of crayfish, the majority breed more than once, with mating among mature yearlings frequent; however, many individuals do not become sexually active until late summer or fall. Females may produce between 30 and 160 eggs and have been found with eggs and/or young from March through September. Juveniles are most frequently found in the summer and have been observed through December, so young appear to be produced from at least March through December. Juveniles can be carried overland by moving water during rainy periods, which aids in dispersal (Keppner and Keppner 2002, p. 11).

Eight crayfish species occur within the range of the Panama City crayfish, although only the hatchet crayfish, *Procambarus kilbyi*, and the jackknife crayfish, *Procambarus hubbelli*, are found in the same habitat as the Panama City crayfish and may co-occur with it (FWC 2017). The Panama City crayfish is not known to hybridize with other species of crayfish.

Historically, the species inhabited natural and often temporary bodies of shallow fresh water within open pine flatwoods and wet prairie-marsh communities. However, most of these communities have been cleared for residential or commercial development or replaced with slash pine plantations. The Panama City crayfish currently inhabits the waters of grassy, gently sloped ditches and swales, slash pine plantations, utility rights-of-way, and a few remnant parcels protected under wetland and private easements (FWC

2016, p. 2).

The highest densities of Panama City crayfish have been recorded in areas with little to no shrub or tree cover (FWC 2016, p. 2). Suitable habitat is normally dominated by herbaceous vegetation. Lowest population densities have occurred in small, open sites where shrubs or trees were present, or in the furrows between bedding rows in some pine plantations (Keppner and Keppner 2005). When encountered in dense titi (*Cyrilla racemiflora* and *Cliftonia monophylla*) swamps, the species was associated with temporarily inundated areas open to the sun with some herbaceous vegetation. Such sites may be considered secondary or suboptimal habitat for the species. On sites where mixed habitat features are present (e.g., partially wooded sites or sites with permanent, deep-water ponds), the Panama City crayfish appears to select favorable areas dominated by herbaceous vegetation, with shallow or fluctuating water levels (FWC 2016, p. 3; Keppner and Keppner 2005).

The Panama City crayfish relies on particular soil types for burrow construction and supporting the herbaceous vegetation; these soil types are categorized as core or secondary soils. Core soils provide the best substrate to support the species; secondary soils are less ideal but still used. The core and secondary soil types that support Panama City crayfish within the species' known range are described in more detail in the SSA report (Service 2019, pp. 23–24).

Panama City crayfish build burrows for shelter, which are normally in or adjacent to surface water when it is present on the hydric soils they inhabit (Hobbs 1981). They construct burrows that contact the water table as the surface water of their habitat recedes, and they occupy burrows when surface water is absent or during periods of extreme water temperatures. They emerge from the burrows when surface water is present again or water temperatures are favorable. It appears that they can survive significant periods of drought in their burrows when they can maintain contact with the

water table. During these dry periods, the Panama City crayfish excavates and lives in unbranched burrows up to 3 feet long that extend down to the water table, thereby enabling the species to remain adequately hydrated and survive (FWC 2016, p. 3).

Little is known about the specific feeding habits of the Panama City crayfish. Observations on Panama City crayfish that were held in aquaria spanning 1.5 plus years (Keppner 2014, entire) indicate that they are detritivores and herbivores. Specimens were offered dead animal material, but they avoided it in favor of processing the substrate for particles of prepared fish food and the fresh aquatic vegetation that were provided as primary food sources. Herbaceous vegetation likely serves as a food source for the Panama City crayfish.

The Panama City crayfish historically ranged throughout south-central Bay County, Florida, within a 56-square-mile area (see figure, below). The historical range likely created one population connected by core and secondary soils. As urban growth came to Panama City, the range became fragmented and isolated patches. Today, the species has 12 localized populations that can be divided into two distinct groups: the western and eastern group. The western group includes eight populations, and the eastern group includes four populations. The 12 populations are described in more detail in the SSA report (Service 2019, pp. 37–52), and are referred to as 19th Street, Old Airport, 390 West, Talkington, Minnesota, Edwards, Transmitter West, College Point, Deer Point, High Point, Star, and Transmitter East.

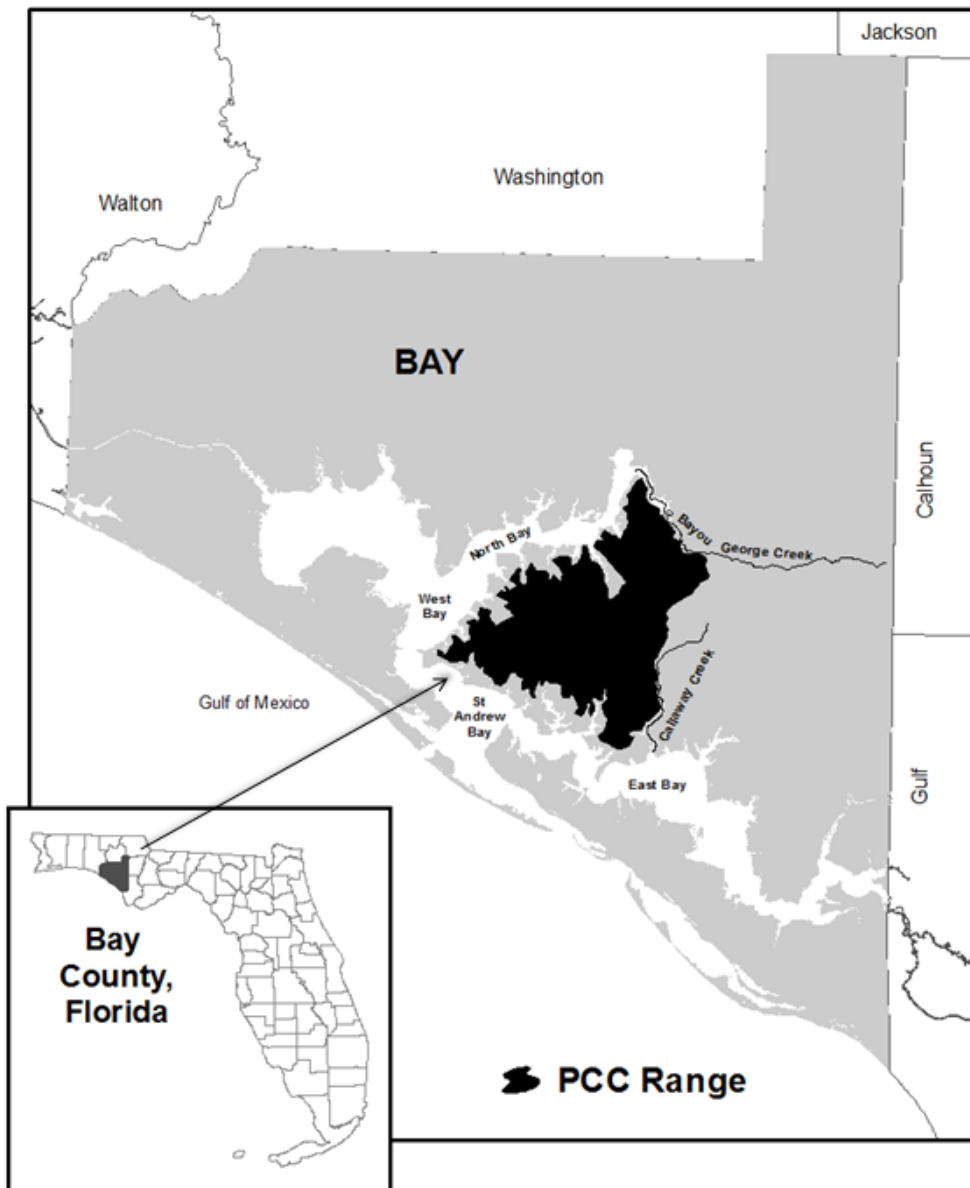


Figure: Range of the Panama City crayfish.

Conservation Strategy

We developed a conservation strategy for Panama City crayfish to identify critical conservation needs (Service 2017, entire). In this conservation strategy, we rely on the known persistence over time of small populations and published meta-analysis (Traill 2007, entire) to estimate that 2,200 acres of actively managed habitat permanently protected and managed within at least seven population units should ensure the Panama City crayfish remains viable for the foreseeable future. This acreage amount is based on a minimum viable population size (MVP) for Panama City crayfish of 5,137 individuals.

Applying the MVP of 5,137 individuals to an estimate of Panama City crayfish population density gives us an estimate of the minimum viable habitat area required to support highly resilient crayfish populations. Thus far, our estimated population sizes at three sites (19th Street, Transmitter West, Talkington) have ranged from 34 to 623 Panama City crayfish in overall habitat areas ranging from 3 to 232 acres (1.2 to 93.9 hectares). Population estimates ranged from 3 to 9 crayfish per acre, which would equate to 6,600 to 19,800 Panama City crayfish if applied across the currently occupied range of the species.

The Panama City crayfish needs multiple resilient populations spread across its range to avoid extinction, although how much redundancy among populations is often uncertain. We currently estimate that 2,200 acres (890 hectares) of permanently protected Panama City crayfish habitat would sustain the viability of multiple (up to 7) populations depending on habitat quality. We estimate that protecting at least four large core populations with between 200 and 800 acres (81 and 324 hectares) within each population, in addition to three smaller populations (less than 200 acres (81 hectares) in size), to be managed with fire or mowing every 2 to 3 years, along with a plan to restore existing conservation easements that have suitable soils for the crayfish will sustain the crayfish into the future (Service 2017, entire). While additional field studies should help to refine this estimate, we determined the conservation goal of 2,200 acres that are permanently protected (890 hectares) would support Panama City crayfish for the foreseeable future. However, at this time, agreements are not in place to ensure the necessary protections, and we do not have certainty about whether and where, or in what configuration, those protections may occur on the landscape.

New Information Regarding Species Status Assessment

On January 3, 2018, we proposed to list the Panama City crayfish as a threatened species (83 FR 330). We accepted comments on the proposal for 60 days, ending on

March 5, 2018. Based on information we received during the public comment period, we revised the analysis in our SSA report (version 2.0, Service 2019, entire). See Appendix IV of the report for details regarding the changes made from version 1.1 to version 2.0 (Service 2019, p. 114). Notably, new genetic information was incorporated into the analysis resulting in the 231-north population being combined with the Star population because they were found to be not genetically distinct; that combined population is now referred to as the Star Avenue population (Duncan et al. 2017, entire). In addition, several of the names of the populations were modified to better reflect location information.

Based on comments received, the current condition analysis was revised to adjust population factors and add information on mark-recapture population estimates. Additionally, the habitat ranking analysis was revised based on information provided during peer review, resulting in revised current habitat conditions for several of the populations (Service 2019, pp. 61–62).

Subsequent to the proposed listing, Hurricane Michael made landfall in Panama City, Florida, on October 10, 2018. A quick assessment was conducted a few weeks post-storm by the Florida Fish and Wildlife Commission (FWC) (FWC 2018, entire), noting downed trees and difficulty for mowing maintenance activities in Panama City crayfish habitats. Power outages from the storm necessitated use of heavy equipment in powerline habitat areas, resulting in extensive rutting and soil compaction in Panama City crayfish habitat. Despite widespread impacts to many areas post-storm, preliminary mark-recapture survey efforts did not show any reduction in Panama City crayfish population size estimates compared to pre-storm estimates.

The future condition tables and subsequent interpretations were revised based on new analysis (Service 2019, pp. 79–93). In summary, the overall estimate of the Panama City crayfish's resiliency remains low across the majority of its geographic range,

particularly in the urbanized western portion. As a result, Panama City crayfish may become extirpated from the vast majority of its range. Future development will likely result in low resiliency, redundancy, and representation across 70 percent of the species' range by 2030. However, as described below, if the remainder (i.e., eastern portion) is protected from development and conservation efforts are focused in the less developed habitat areas, the species is predicted to sustain populations in the wild for the foreseeable future.

The most notable revision to the SSA report is the inclusion of a new conservation scenario for our analysis of future conditions (Service 2019, pp. 93–98). This conservation scenario is based on the conservation strategy that includes permanent protection and management of approximately 2,200 acres (890 hectares) of habitat across seven populations (Service 2017, entire). The predicted outcomes of the conservation scenario are straightforward, with populations with higher resiliency continuing to maintain or have improved resiliency in the future as land management efforts improve. Although anticipated habitat protection and habitat management will not immediately change any of the overall current condition ranks, it should, when coupled with the population management measures agreed to by FWC and the Service, ensure that populations with high resiliency will remain so regardless of future development, which is the primary threat to the Panama City crayfish. Additionally, population management measures (e.g., translocation) detailed in this scenario should improve the genetic health and population size of several managed populations. Finally, improved monitoring and applied research agreed to by the Service and FWC should also improve our knowledge of the status of each population to better adjust management actions as needed in the future.

Bay County staff and staff with the Florida Department of Transportation (FDOT) have taken the initiative to expedite conservation of the Panama City crayfish. These

efforts, when merged with a longstanding partnership between the FWC and the Service, provide the potential for a significant change in the outlook on the future status of the Panama City crayfish. The prospect of a large acquisition of land to protect the species from its primary threat of habitat loss through development is being considered by those who have a stake in the conservation of the Panama City crayfish. Along with a variety of habitat management commitments to be implemented by, or with the oversight of, FWC, the Service, and local partners, this could provide a substantial and immediate benefit to a species that is experiencing rapid declines in its small remaining habitat areas.

We have carefully assessed this new scientific and commercial information in light of the past, present, and future threats to the Panama City crayfish. Our analysis of this information indicates that, at the species level, habitat development continues to be the primary factor affecting the Panama City crayfish now and into the future.

Based on our analysis of the species' current and future conditions, we conclude that the population and habitat factors used to determine the resiliency, representation, and redundancy for Panama City crayfish will continue to decline so that it is likely that the species will become in danger of extinction within the foreseeable future throughout its range. Therefore, on the basis of the best available scientific and commercial information, we affirm our proposed listing of the Panama City crayfish as a threatened species in accordance with sections 3(20) and 4(a)(1) of the Act.

Proposed Rule Issued Under Section 4(d) of the Act for the Panama City Crayfish

Background

Section 4(d) of the Act contains two sentences. The first sentence states that the Secretary shall issue such regulations as he deems necessary and advisable to provide for the conservation of species listed as threatened. The U.S. Supreme Court has noted that statutory language like "necessary and advisable" demonstrates a large degree of deference to the agency (see *Webster v. Doe*, 486 U.S. 592 (1988)). Conservation is

defined in the Act to mean the use of all methods and procedures which are necessary to bring any endangered species or threatened species to the point at which the measures provided pursuant to the Act are no longer necessary. Additionally, the second sentence of section 4(d) of the Act states that the Secretary may by regulation prohibit with respect to any threatened species any act prohibited under section 9(a)(1), in the case of fish or wildlife, or section 9(a)(2), in the case of plants. Thus, the combination of the two sentences of section 4(d) provides the Secretary with wide latitude of discretion to select and promulgate appropriate regulations tailored to the specific conservation needs of the threatened species. The second sentence grants particularly broad discretion to the Service when adopting the prohibitions under section 9.

The courts have recognized the extent of the Secretary's discretion under this standard to develop rules that are appropriate for the conservation of a species. For example, courts have upheld rules developed under section 4(d) as a valid exercise of agency authority where they prohibited take of threatened wildlife or include a limited taking prohibition (see *Alsea Valley Alliance v. Lautenbacher*, 2007 U.S. Dist. Lexis 60203 (D. Or. 2007); *Washington Environmental Council v. National Marine Fisheries Service*, 2002 U.S. Dist. Lexis 5432 (W.D. Wash. 2002)). Courts have also upheld 4(d) rules that do not address all of the threats a species faces (see *State of Louisiana v. Verity*, 853 F.2d 322 (5th Cir. 1988)). As noted in the legislative history when the Act was initially enacted, "once an animal is on the threatened list, the Secretary has an almost infinite number of options available to him with regard to the permitted activities for those species. He may, for example, permit taking, but not importation of such species, or he may choose to forbid both taking and importation but allow the transportation of such species" (H.R. Rep. No. 412, 93rd Cong., 1st Sess. 1973).

Exercising this authority under the Act's section 4(d), we have developed a proposed rule that is designed to address the Panama City crayfish's specific threats and

conservation needs. Although the statute does not require us to make a “necessary and advisable” finding with respect to the adoption of specific prohibitions under section 9, we find that this rule as a whole satisfies the requirement in section 4(d) of the Act to issue regulations deemed necessary and advisable to provide for the conservation of the Panama City crayfish. As described in the **Summary of Biological Status and Threats** section of the proposed listing rule (83 FR 330; January 3, 2018), we concluded that the Panama City crayfish is likely to become in danger of extinction within the foreseeable future primarily due to habitat loss and degradation, habitat fragmentation, and subpopulation isolation due to development.

The provisions of this proposed 4(d) rule would promote conservation of the Panama City crayfish by encouraging management of the landscape in ways that meet the conservation needs of the Panama City crayfish and are consistent with land management considerations. The provisions of this proposed rule are one of many tools that we would use to promote the conservation of the Panama City crayfish. This proposed 4(d) rule would apply only if and when we finalize the listing of the Panama City crayfish as a threatened species.

Provisions of the Proposed 4(d) Rule

This proposed 4(d) rule would provide for the conservation of the Panama City crayfish by prohibiting the following activities, except as otherwise authorized or permitted: importing or exporting; take; possession and other acts with unlawfully taken specimens; delivering, receiving, transporting, or shipping in interstate or foreign commerce in the course of commercial activity; or selling or offering for sale in interstate or foreign commerce.

Multiple factors are affecting the status of the Panama City crayfish, with the primary threats resulting in habitat loss and degradation, habitat fragmentation, and population isolation. A range of activities have the potential to affect these species,

including farming and grazing practices, improper silvicultural practices, creation of roadside ditches, rights-of-way, development of residential or commercial properties, and collection for bait (Service 2019, pp. 65–66). These threats, which are expected to be exacerbated by continued development along with the effects of climate change, were central to our assessment of the future viability of the Panama City crayfish.

Under the Act, “take” means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct. Some of these provisions have been further defined in regulations at 50 CFR 17.3. Take can result knowingly or otherwise, by direct and indirect impacts, intentionally or incidentally. Regulating incidental and intentional take would help preserve the species’ remaining populations, slow their rate of decline, and decrease synergistic, negative effects from other stressors. Therefore, we propose to prohibit intentional and incidental take of the Panama City crayfish, except for those actions and activities specifically excepted by the 4(d) rule.

We may issue permits to carry out otherwise prohibited activities, including those described above, involving threatened wildlife under certain circumstances. Regulations governing permits for threatened wildlife are codified at 50 CFR 17.32. With regard to threatened wildlife, a permit may be issued for the following purposes: for scientific purposes, to enhance the propagation or survival of the species, for economic hardship, for zoological exhibition, for educational purposes, for incidental taking, or for special purposes consistent with the purposes of the Act. There are also certain statutory exemptions from the prohibitions, which are found in sections 9 and 10 of the Act.

The proposed 4(d) rule would also provide for the conservation of the species by allowing exceptions to actions and activities that, while they may have some minimal level of disturbance or take to the Panama City crayfish, are not expected to rise to the level that would negatively impact the species’ conservation and recovery efforts. The

proposed exceptions to these prohibitions include conservation efforts by the Service or State wildlife agencies, and certain development practices, select land management activities, and some utility actions (described below) that are expected to have negligible impacts to the Panama City crayfish and its habitat.

The first exception is for conservation and restoration efforts for listed species by the Service or State wildlife agencies, including, but not limited to, collection of broodstock, tissue collection for genetic analysis, captive propagation, and subsequent stocking into unoccupied areas within the historical range of the species, and follow-up monitoring. The proposed 4(d) rule would allow take of the Panama City crayfish without a permit by any employee or agent of the Service or a State conservation agency designated by the agency for such purposes and when acting in the course of their official duties if such action is necessary to aid a sick, injured, or orphaned specimen; to dispose of a dead specimen; or to salvage a dead specimen which may be useful for scientific study.

We recognize our special and unique relationship with our State natural resource agency partners in contributing to conservation of listed species. State agencies often possess scientific data and valuable expertise on the status and distribution of endangered, threatened, and candidate species of wildlife and plants. State agencies, because of their authorities and their close working relationships with local governments and landowners, are in a unique position to assist the Services in implementing all aspects of the Act. In this regard, section 6 of the Act provides that the Services shall cooperate to the maximum extent practicable with the States in carrying out programs authorized by the Act. Therefore, any qualified employee or agent of a State conservation agency that is a party to a cooperative agreement with the Service in accordance with section 6(c) of the Act, who is designated by his or her agency for such purposes, would be able to conduct activities designed to conserve the Panama City crayfish that may result in otherwise

prohibited take without additional authorization. In addition, Federal and State wildlife law enforcement officers, working in coordination with Service field office personnel, may possess, deliver, carry, transport, or ship Panama City crayfish taken in violation of the Act as necessary.

The second exception is for certain development activities that will have negligible or beneficial effects on the Panama City crayfish and its habitat, including: maintenance of existing structures and construction or reconstruction activities that occur within the existing footprint of previously developed areas; new structures that occur within 100 feet of existing structures on an individual private landowner's property and with a new footprint less than 1,000 square feet (ft²), such as a pool or shed associated with an existing house; culvert installations for individual landowners not associated with larger developments; installation of platforms or boardwalks for recreational purposes on conservation lands that allow sunlight of sufficient levels to maintain herbaceous groundcover; and paths used for nonmotorized activities as long as the project footprint, including construction impacts, impacts no more than 5 percent of the acreage in core or secondary soils within properties under a conservation easement.

The third exception is for select land management activities related to silvicultural (forestry) activities and invasive species control that help maintain habitat for Panama City crayfish and agricultural maintenance activities, that have de minimus effects. Silviculture activities within secondary soils including tree thinning, harvest (including clearcutting), site preparation, planting, and replanting following state best management practices (BMPs) (FDACS 2008, entire) are excepted as the species has persisted in lands under timber management where native groundcover species recolonize naturally. Prescribed burning, wildfire control efforts, herbicide applications targeting exotic plants or shrub species are excepted when following all other state and federal BMPs or permits associated with these actions. Finally, agricultural maintenance activities in pasture and

rangelands (including cattle operations) that were established prior to publication of the proposed listing rule (January 3, 2018) that do not have indirect impacts to adjacent Panama City crayfish habitat will be excepted.

The fourth exception is for some utility actions that are expected to have minimal impacts to the Panama City crayfish or its habitat. These include ditch mowing and maintenance activities outside of critical habitat units, or ditch mowing and maintenance within critical habitat units after coordination with the local FWS office. Culvert replacements or maintenance that do not adversely affect, but improve or restore, the natural hydrology are excepted. In coordination with the local FWS office, the following are excepted: maintenance of rights-of-way, powerline and pole placements and replacements, and directional boring by utility owners.

We reiterate that these actions and activities may have some minimal level of take of the Panama City crayfish, but any such take is expected to be rare and insignificant, and is not expected to negatively impact the species' conservation and recovery efforts. We expect the restoration activities to have a net beneficial effect on the species. Across the species' range, habitat has been degraded and fragmented by development and land use changes. The habitat restoration activities in the proposed 4(d) rule are intended to improve habitat conditions for the species in the long term.

Nothing in this proposed 4(d) rule would change in any way the recovery planning provisions of section 4(f) of the Act, the consultation requirements under section 7 of the Act, or the ability of the Service to enter into partnerships for the management and protection of the Panama City crayfish. However, interagency cooperation may be further streamlined through planned programmatic consultations for the species between Federal agencies and the Service, where appropriate. We ask the public, particularly State agencies and other interested stakeholders that may be affected by the proposed 4(d) rule, to provide comments and suggestions regarding additional

guidance and methods that the Service could provide or use, respectively, to streamline the implementation of this proposed 4(d) rule (see **Information Requested**, above).

Proposed Critical Habitat Determination

Background

Critical habitat is defined in section 3 of the Act as:

(1) The specific areas within the geographical area occupied by the species, at the time it is listed in accordance with the Act, on which are found those physical or biological features

(a) Essential to the conservation of the species, and

(b) Which may require special management considerations or protection; and

(2) Specific areas outside the geographical area occupied by the species at the time it is listed, upon a determination that such areas are essential for the conservation of the species.

Our regulations at 50 CFR 424.02 define the geographical area occupied by the species as an area that may generally be delineated around species' occurrences, as determined by the Secretary (i.e., range). Such areas may include those areas used throughout all or part of the species' life cycle, even if not used on a regular basis (e.g., migratory corridors, seasonal habitats, and habitats used periodically, but not solely by vagrant individuals).

Conservation, as defined under section 3 of the Act, means to use and the use of all methods and procedures that are necessary to bring an endangered or threatened species to the point at which the measures provided pursuant to the Act are no longer necessary. Such methods and procedures include, but are not limited to, all activities associated with scientific resources management such as research, census, law enforcement, habitat acquisition and maintenance, propagation, live trapping, and

transplantation, and, in the extraordinary case where population pressures within a given ecosystem cannot be otherwise relieved, may include regulated taking.

Critical habitat receives protection under section 7 of the Act through the requirement that Federal agencies ensure, in consultation with the Service, that any action they authorize, fund, or carry out is not likely to result in the destruction or adverse modification of critical habitat. The designation of critical habitat does not affect land ownership or establish a refuge, wilderness, reserve, preserve, or other conservation area. Designation also does not allow the government or public to access private lands, nor does designation require implementation of restoration, recovery, or enhancement measures by non-Federal landowners. Where a landowner requests Federal agency funding or authorization for an action that may affect a listed species or critical habitat, the Federal agency would be required to consult with the Service under section 7(a)(2) of the Act. However, even if the Service were to conclude that the proposed activity would result in destruction or adverse modification of the critical habitat, the Federal action agency and the landowner are not required to abandon the proposed activity, or to restore or recover the species; instead, they must implement “reasonable and prudent alternatives” to avoid destruction or adverse modification of critical habitat.

Under the first prong of the Act’s definition of critical habitat, areas within the geographical area occupied by the species at the time it was listed are included in a critical habitat designation if they contain physical or biological features (1) which are essential to the conservation of the species and (2) which may require special management considerations or protection. For these areas, critical habitat designations identify, to the extent known using the best scientific and commercial data available, those physical or biological features that are essential to the conservation of the species (such as space, food, cover, and protected habitat). In identifying those physical or biological features that occur in specific occupied areas, we focus on the specific features

that are essential to support the life-history needs of the species, including, but not limited to, water characteristics, soil type, geological features, prey, vegetation, symbiotic species, or other features. A feature may be a single habitat characteristic or a more complex combination of habitat characteristics. Features may include habitat characteristics that support ephemeral or dynamic habitat conditions. Features may also be expressed in terms relating to principles of conservation biology, such as patch size, distribution distances, and connectivity.

Under the second prong of the Act's definition of critical habitat, we can designate critical habitat in areas outside the geographical area occupied by the species at the time it is listed, upon a determination that such areas are essential for the conservation of the species. When designating critical habitat, the Secretary will first evaluate areas occupied by the species. The Secretary will only consider unoccupied areas to be essential where a critical habitat designation limited to geographical areas occupied by the species would be inadequate to ensure the conservation of the species. In addition, for an unoccupied area to be considered essential, the Secretary must determine that there is a reasonable certainty both that the area will contribute to the conservation of the species and that the area contains one or more of those physical or biological features essential to the conservation of the species.

Section 4 of the Act requires that we designate critical habitat on the basis of the best scientific data available. Further, our Policy on Information Standards Under the Endangered Species Act (published in the *Federal Register* on July 1, 1994 (59 FR 34271)), the Information Quality Act (section 515 of the Treasury and General Government Appropriations Act for Fiscal Year 2001 (Pub. L. 106-554; H.R. 5658)), and our associated Information Quality Guidelines provide criteria, establish procedures, and provide guidance to ensure that our decisions are based on the best scientific data available. They require our biologists, to the extent consistent with the Act and with the

use of the best scientific data available, to use primary and original sources of information as the basis for recommendations to designate critical habitat.

When we are determining which areas should be designated as critical habitat, our primary source of information is generally the information from the SSA report and information developed during the listing process for the species. Additional information sources may include any generalized conservation strategy, criteria, or outline that may have been developed for the species; the recovery plan for the species; articles in peer-reviewed journals; conservation plans developed by States and counties; scientific status surveys and studies; biological assessments; other unpublished materials; or experts' opinions or personal knowledge.

Habitat is dynamic, and species may move from one area to another over time. We recognize that critical habitat designated at a particular point in time may not include all of the habitat areas that we may later determine are necessary for the recovery of the species. For these reasons, a critical habitat designation does not signal that habitat outside the designated area is unimportant or may not be needed for recovery of the species. Areas that are important to the conservation of the species, both inside and outside the critical habitat designation, and where the species may be present, will continue to be subject to: (1) Conservation actions implemented under section 7(a)(1) of the Act; (2) regulatory protections afforded by the requirement in section 7(a)(2) of the Act for Federal agencies to ensure their actions are not likely to jeopardize the continued existence of any endangered or threatened species; and (3) the prohibitions found in section 9 of the Act. Federally funded or permitted projects affecting listed species outside their designated critical habitat areas may still result in jeopardy findings in some cases. These protections and conservation tools will continue to contribute to recovery of this species. Similarly, critical habitat designations made on the basis of the best available information at the time of designation will not control the direction and substance of

future recovery plans, habitat conservation plans (HCPs), or other species conservation planning efforts if new information available at the time of these planning efforts calls for a different outcome.

Prudency Determination

Section 4(a)(3) of the Act, as amended, and implementing regulations (50 CFR 424.12) require that, to the maximum extent prudent and determinable, the Secretary shall designate critical habitat at the time the species is determined to be an endangered or threatened species. Our regulations (50 CFR 424.12(a)(1)) state that the Secretary may, but is not required to, determine that a designation would not be prudent in the following circumstances:

(i) The species is threatened by taking or other human activity and identification of critical habitat can be expected to increase the degree of such threat to the species;

(ii) The present or threatened destruction, modification, or curtailment of a species' habitat or range is not a threat to the species, or threats to the species' habitat stem solely from causes that cannot be addressed through management actions resulting from consultations under section 7(a)(2) of the Act;

(iii) Areas within the jurisdiction of the United States provide no more than negligible conservation value, if any, for a species occurring primarily outside the jurisdiction of the United States;

(iv) No areas meet the definition of critical habitat; or

(v) The Secretary otherwise determines that designation of critical habitat would not be prudent based on the best scientific data available.

As discussed in the January 3, 2018, proposed listing rule (83 FR 330), there is currently no imminent threat of take attributed to collection or vandalism identified under Factor B for this species, and identification and mapping of critical habitat is not expected to initiate any such threat. In our SSA and proposed listing determination for the

Panama City crayfish, we determined that the present or threatened destruction, modification, or curtailment of habitat or range is a threat to the Panama City crayfish and that those threats in some way can be addressed by section 7(a)(2) consultation measures. The species occurs wholly in the jurisdiction of the United States, and we are able to identify areas that meet the definition of critical habitat. Therefore, because none of the circumstances enumerated in our regulations at 50 CFR 424.12(a)(1) apply and because there are no other circumstances the Secretary has identified for which this designation of critical habitat would be not prudent, we have determined that the designation of critical habitat is prudent for the Panama City crayfish.

Critical Habitat Determinability

Having determined that designation is prudent, under section 4(a)(3) of the Act we must find whether critical habitat for the Panama City crayfish is determinable. Our regulations at 50 CFR 424.12(a)(2) state that critical habitat is not determinable when one or both of the following situations exist:

- (i) Data sufficient to perform required analyses are lacking, or
- (ii) The biological needs of the species are not sufficiently well known to identify any area that meets the definition of “critical habitat.”

When critical habitat is not determinable, the Act allows the Service an additional year to publish a critical habitat designation (16 U.S.C. 1533(b)(6)(C)(ii)).

We reviewed the available information pertaining to the biological needs of the species and habitat characteristics where this species is located. This and other information represent the best scientific data available and led us to conclude that the designation of critical habitat is determinable for the Panama City crayfish.

Physical or Biological Features Essential to the Conservation of the Species

In accordance with section 3(5)(A)(i) of the Act and regulations at 50 CFR 424.12(b), in determining which areas we will designate as critical habitat from within

the geographical area occupied by the species at the time of listing, we consider the physical or biological features that are essential to the conservation of the species and that may require special management considerations or protection. The regulations at 50 CFR 424.02 define “physical or biological features essential to the conservation of the species” as the features that occur in specific areas and that are essential to support the life-history needs of the species, including, but not limited to, water characteristics, soil type, geological features, sites, prey, vegetation, symbiotic species, or other features. A feature may be a single habitat characteristic or a more complex combination of habitat characteristics. Features may include habitat characteristics that support ephemeral or dynamic habitat conditions. Features may also be expressed in terms relating to principles of conservation biology, such as patch size, distribution distances, and connectivity. For example, physical features essential to the conservation of the species might include gravel of a particular size required for spawning, alkaline soil for seed germination, protective cover for migration, or susceptibility to flooding or fire that maintains necessary early-successional habitat characteristics. Biological features might include prey species, forage grasses, specific kinds or ages of trees for roosting or nesting, symbiotic fungi, or a particular level of nonnative species consistent with conservation needs of the listed species. The features may also be combinations of habitat characteristics and may encompass the relationship between characteristics or the necessary amount of a characteristic essential to support the life history of the species.

In considering whether features are essential to the conservation of the species, we may consider an appropriate quality, quantity, and spatial and temporal arrangement of habitat characteristics in the context of the life-history needs, condition, and status of the species. These characteristics include, but are not limited to, space for individual and population growth and for normal behavior; food, water, air, light, minerals, or other nutritional or physiological requirements; cover or shelter; sites for breeding,

reproduction, or rearing (or development) of offspring; and habitats that are protected from disturbance. These characteristics are described below for the Panama City crayfish:

(1) Space for individual and population growth and for normal behavior: The Panama City crayfish naturally inhabits shallow, ephemeral, freshwater wetlands that are associated with early successional wet prairie-marsh and wet pine flatwoods and their associated communities. These locations historically supported a native herbaceous plant community dominated by native wetland grasses and sedges with an accompanying overstory of no to low-density pines and were naturally maintained by periodic wildfire.

(2) Food, water, air, light, minerals, or other nutritional or physiological requirements: Native herbaceous vegetation is important to the Panama City crayfish for food, detritus formation, and cover. Absence of vegetation increases exposure of this small crayfish to predation and reduced availability of food. Although Panama City crayfish are facultative air breathers, moisture is required to facilitate the respiratory process. Burrowing to groundwater or access to surface water are both important habitat features needed to prevent desiccation of individuals and populations. The Panama City crayfish cannot burrow much deeper than 3 feet below the surface and prefer surface waters less than 1 foot deep (E.Keppner 2003, pers. comm.).

(3) Cover or shelter: The Panama City crayfish relies mostly on herbaceous vegetation that grows on core and secondary soils, which allow them to burrow for shelter and to rear young. The ability to burrow to the water table during times of drought is essential to the persistence of the species. Core soils have depth to water tables that meet the depth threshold that is important for long-term Panama City crayfish population persistence. These core soils provide the sediment structure needed for burrow construction to the water table and also support the herbaceous vegetation upon which the species relies for food and cover. Young crayfish are often captured clinging

to vegetation in emergent, yet shallow, water bodies.

Secondary soil types are drier, and it is believed the species cannot persist when only secondary soils are available with below-average water tables. They are mentioned here because they may support Panama City crayfish after recent rainfalls and longer periods of time after above-average rainfall that influences water table depths, and they may provide connectivity between two patches of core soils. Ninety-six percent of known occurrences of Panama City crayfish occur within either core soils or within secondary soils that are within 100 meters (328 feet) of core soils. These secondary soils also provide the sediment structure needed for burrow construction to the water table and also support the herbaceous vegetation upon which the species relies for food and cover except during times of drought.

(4) Sites for breeding, reproduction, or rearing (or development) of offspring: Shelters, such as burrows, are an important resource for crayfish as they provide for protection from predation and space for mating and for rearing hatchlings. Burrows also help to maintain hydration and preferred body temperatures. Surface waters provide shelter for juveniles to grow prior to being large enough to burrow. These surface water locations also provide for breeding and feeding grounds. Surface water must be sufficiently deep, but usually less than 1 foot (0.3 meters) deep, to support the species but shallow enough to sustain herbaceous vegetation. Waters greater than 1 foot (0.3 meters) deep sustain other crayfish species that may outcompete the Panama City crayfish.

(5) Habitats that are protected from disturbance or are representative of the historical, geographical, and ecological distributions of a species: the Panama City crayfish's historical range is estimated to cover a 56-square-mile area (Service 2019, entire). Hardwood swamps fall within the core soil category but are not actually suitable for the Panama City crayfish (except the transition edge habitat). Land acreages within the Panama City crayfish's range total 35,658 acres, with a composition of the following

soils: (1) Core with 14,880 acres (6,022 hectares; 42 percent of the land area); (2) secondary with 12,379 acres (5,010 hectares; 35 percent of the land area), and (3) unsuitable soils with 8,399 acres (3,399 hectares; 23 percent of the land area). We estimate that approximately 9,180 acres (3,715 hectares) of core and 5,647 acres (2,285 hectares) of secondary soils remain undeveloped (using 2016 data) and are therefore suitable for the Panama City crayfish. We estimate that 3,606 acres (1,459 hectares) of the core (3,242 acres (1,312 hectares, or 22 percent)) and secondary (364 acres (147 hectares, or 3 percent)) soils are hardwood swamp, which are not directly used by the Panama City crayfish but are included within acreage totals because they provide transition habitat.

Summary of Essential Physical or Biological Features

We derive the specific physical or biological features essential to the conservation of the Panama City crayfish from studies of this species' habitat, ecology, and life history as described above. Additional information can be found in the proposed listing rule published in the *Federal Register* on January 3, 2018 (83 FR 330), and the Panama City Crayfish SSA report (version 2.0; Service 2019, entire). We have determined that the following physical or biological features are essential to the conservation of the Panama City crayfish:

(1) Undeveloped lands, including cropland, utilities rights-of-way, timberlands, or grazing lands, that support open wet pine flatwoods and wet prairie habitats that contain the following:

(a) Appropriate herbaceous groundcover vegetation;

(b) Permanent or temporary pools of shallow (usually less than 1 foot) freshwater locations; and

(c) Gently-sloped ground level swales with a 3:1 or shallower slope ratio along ecotonal or transitional areas.

(2) Soil types within undeveloped lands that provide sediment structure needed for burrow construction and that support some native herbaceous vegetation and the likelihood of native seed bank that with management will provide vegetation needed for additional food and cover, and where the ground water is always within 3 feet of the ground surface and surface waters occur on occasion. These soil types include:

(a) Core soils for Panama City crayfish, including (note: prefix numbers refer to map units in the Soil Survey for Bay County, Florida (USDA 1984, entire)): (22)

Pamlico-Dorovan Complex, (29) Rutlege Sand, (32) Plummer Sand, (33) Pelham Sand, (39) Pantego Sandy Loam, and (51) Rutledge- Pamlico Complex;

(b) Secondary soils within 100 meters (328 feet) of core soils: (1) Albany Sand, (12) Leefield Sand, (13) Leon Fine Sand, (31) Osier Fine Sand, and (36) Alapaha Loamy Sand; and

(c) Soils that support native herbaceous vegetation such as, but not limited to, wiregrass (*Aristida beyrichiana*), redroot (*Lachnanthes caroliniana*), beakrushes (*Rhynchospora* spp.), pitcher plants (*Sarracenia* spp.), sundews (*Drosera* spp.), butterworts (*Pinguicula* spp.), and lilies (*Hymenocallis* spp.).

(3) Undeveloped lands that contain surface and groundwater of sufficient quality to support all life stages of the Panama City crayfish and the herbaceous vegetation on which they rely. This includes surface waters with:

(a) Oxygen levels that range between 2 and 9 milligrams per liter;

(b) pH levels between 4.1 and 9.2; and

(c) Temperatures between 42 and 94 degrees Fahrenheit (°F) (5 and 34.4 degrees Celsius (°C)), although optimum temperatures are thought to be in the range of 68 to 79 °F (20 to 26 °C) (Butler et al. 2003).

Special Management Considerations or Protection

When designating critical habitat, we assess whether the specific areas within the

geographical area occupied by the species at the time of listing contain features which are essential to the conservation of the species and which may require special management considerations or protection. The features essential to the conservation of this species may require special management considerations or protection to reduce the following threats: habitat loss and destruction due to residential and commercial development, as well as habitat loss due to changes in the natural disturbance and hydrological regimes that maintain the wet prairie and flatwoods that Panama City crayfish originally inhabited. Historically, the Panama City crayfish inhabited natural and often temporary bodies of shallow fresh water within open pine flatwoods and prairie-marsh communities (as described in the SSA report (version 2.0; Service 2019, p. 56)). However, most of these communities have been cleared for residential or commercial development or replaced with slash pine (*Pinus elliottii*) plantations. Thus, the Panama City crayfish currently is known to inhabit the waters of grassy, gently-sloped ditches and swales; furrows within slash pine plantations; and utility rights-of-way.

Special management considerations or protections are required within critical habitat areas to address these habitat loss and destruction threats. The occupied units we are proposing to designate as critical habitat for Panama City crayfish will require some level of management to address the current and future threats to the physical or biological features. Management activities that could ameliorate these threats include (but are not limited to): (1) Protection of lands from development through purchase, easement, or other conservation agreements that will prevent permanent conversion of Panama City crayfish habitat to other land uses; and (2) restoration and management of habitat to maintain the appropriate vegetative and hydrological characteristics for the Panama City crayfish.

These management activities will protect the physical or biological features for the species by protecting currently suitable habitat from being converted to other land

uses and by promoting the appropriate vegetative and hydrological characteristics that the Panama City crayfish needs for survival. Additionally, management of habitat to protect the physical or biological features on occupied critical habitat will help achieve recovery of the Panama City crayfish.

Criteria Used to Identify Critical Habitat

As required by section 4(b)(2) of the Act, we use the best scientific data available to designate critical habitat. In accordance with the Act and our implementing regulations at 50 CFR 424.12(b), when designating critical habitat, the Secretary will first evaluate areas occupied by the species. The Secretary will only consider unoccupied areas to be essential where a critical habitat designation limited to geographical areas occupied would be inadequate to ensure the conservation of the species. We are not currently proposing to designate any areas outside the geographical area occupied by the species because we have not identified any unoccupied areas that meet the definition of critical habitat and because occupied areas are sufficient to ensure the conservation of the species.

We reviewed available information that pertains to the habitat requirements of this species using information that was cited within the SSA report (Service 2019, entire) and information presented in the Service's conservation strategy for Panama City crayfish critical conservation needs (Service 2017, entire); sources of information on habitat requirements include existing State management plans, endangered species reports, studies conducted at occupied sites and published in peer-reviewed articles, agency reports, and data collected during monitoring efforts (Service 2019, entire). Based on known occurrences and habitat requirements, critical habitat units were mapped in ArcMap (ESRI, Inc.) using the U.S. Department of Agriculture, Natural Resources Conservation Service, Soil Survey Geographic Database (USDA 2019, unpaginated). ArcGIS software was used to calculate the acreage of core and secondary soils within the

historical range of the Panama City crayfish prior to anthropogenic habitat disturbances. Core soil types (as described in *Species Description* in the proposed listing rule (83 FR 330, January 3, 2018, pp. 332–333) and in *Physical or Biological Features Essential to the Conservation of the Species*, above) were buffered by 100 meters. We used 100 meters as our buffer because we found that 96 percent of known occurrences of Panama City crayfish occur within 100 meters of core soils and this buffer encompasses the secondary soil types (as described in *Species Description* in the proposed listing rule (83 FR 330, January 3, 2018, pp. 332–333) and in *Physical or Biological Features Essential to the Conservation of the Species*, above). In geographic information systems (GIS) mapping, the buffered soils were spatially processed by clipping to the population buffer of one-quarter mile, and developed areas were excluded based on 2016 Florida Department of Transportation aerial imagery (FDOT 2016, unpaginated).

In summary, for areas within the geographic area occupied by the species at the time of listing and with sufficient availability of land, we delineate critical habitat unit boundaries using the following criteria:

(1) Suitable habitat surrounding each of 10 known populations of Panama City crayfish, delineated by polygons using one-quarter mile (0.4 kilometer (km)) circles around sample points with known species occurrences, based on the movement patterns of small crayfishes (note: habitat surrounding two populations was not included for critical habitat designation, as explained below);

(2) Core and secondary soils within 100 meters (328 feet) of core soils that contain one or more of the physical or biological features to support life-history functions essential for conservation of the Panama City crayfish.

Hardwood swamps found within core soils are considered unsuitable for the crayfish, and this habitat type was removed to the maximum extent possible.

The total acreage calculated for critical habitat based upon the above criteria

amounted to 7,177 acres (2,904 hectares). Accordingly, we propose to designate as critical habitat those areas that contain the physical and biological features essential to the Panama City crayfish and that are currently occupied by the species.

For the purposes of critical habitat designation, we determined a unit to be occupied if it contains recent (i.e., observed since 2015) observations of Panama City crayfish. The proposed critical habitat designation does not include all lands known to have been occupied by the species historically; instead, it focuses on currently occupied lands that have retained the necessary physical or biological features that will allow for the maintenance and expansion of existing populations. The following locations (i.e., populations as defined in the SSA) meet the definition of areas occupied by the species at the time of listing and that present sufficient availability of lands to support a population: 19th Street, Talkington, Minnesota, Transmitter West, Deer Point, High Point, Star, and Transmitter East. College Point and Old Airport populations were not consistently occupied, nor was there sufficient suitable habitat within the one-quarter-mile (0.4-km) polygon to support recovery, and these populations, therefore, are not included in the proposed designation. We also do not include Edwards, a population representing an original collection site from 1942, nor 390 West given the fragmentation of that population by the industrial park resulted in too little remaining habitat to support a viable population over time. While both areas are still occupied by Panama City crayfish, Edwards is surrounded by industrial buildings and bordered by U.S. Route 231 on its west edge, and 390 West will soon be bisected by a four-lane highway as it is currently under construction. Potential habitat for recovery in either of these locations is limited and potentially fragmented. Long-term management will be challenging given proximity to major roadways and industrial development. As mentioned above, we exclude developed areas within the proposed designation to the extent possible in the mapping exercise and in the text of the rule, as explained below. Designating critical habitat in

these eight occupied areas of the Panama City crayfish would sufficiently conserve the species, leading to its recovery.

We are not proposing to designate any areas outside the geographical area occupied by the species because we have not identified any unoccupied areas that are essential to the conservation of the species. In addition, based on our conservation strategy, the protection of the eight occupied units (as further described below) are sufficient for the conservation of the species.

When determining proposed critical habitat boundaries, we made every effort to avoid including developed areas such as lands covered by buildings, pavement, and other structures because such lands lack physical or biological features necessary for the Panama City crayfish. The scale of the maps we prepared under the parameters for publication within the Code of Federal Regulations may not reflect the exclusion of such developed lands. Any such lands inadvertently left inside critical habitat boundaries shown on the maps of this proposed rule have been excluded by text in the proposed rule and are not proposed for designation as critical habitat. Therefore, if the critical habitat is finalized as proposed, a Federal action involving these lands would not trigger section 7 consultation with respect to critical habitat and the requirement of no adverse modification unless the specific action would affect the physical or biological features in the adjacent critical habitat.

We propose to designate as critical habitat lands that we have determined are occupied at the time of listing (i.e., currently occupied) and that contain one or more of the physical or biological features that are essential to support life-history processes of the species.

Units are proposed for designation based on one or more of the physical or biological features being present to support Panama City crayfish's life-history processes. All units contain all of the identified physical or biological features and support multiple

life-history processes.

The critical habitat designation is defined by the map or maps, as modified by any accompanying regulatory text, presented at the end of this document under **Proposed Regulation Promulgation**. We include more detailed information on the boundaries of the critical habitat designation in the preamble of this document. We will make the shapefiles on which each map is based available to the public on <http://www.regulations.gov> at Docket No. FWS–R4–ES–2020–0137, on our Internet site <http://ecos.fws.gov>, and at the Florida Ecological Services Field Office (see **FOR FURTHER INFORMATION CONTACT**).

Proposed Critical Habitat Designation

We are proposing eight units as critical habitat for the Panama City crayfish. The critical habitat units we describe below constitute our assessment based on the best available science of areas that meet the definition of critical habitat for the Panama City crayfish. In total, they comprise 7,177 acres (2,904 hectares) of land, entirely within Bay County, Florida. The table below summarizes the approximate area and ownership of the units, which are described in detail below.

Table of proposed critical habitat units for the Panama City crayfish.

GROUP	UNIT	UNIT NAME	OCCUPIED	LAND OWNERSHIP (AC.)		TOTAL PROPOSED CRITICAL HABITAT AREA (AC.)	PERCENT OF TOTAL
				PRIVATE	STATE/ LOCAL		
Western	1	19th Street	Yes	20.6	3.7	24.3	0%
	2	Talkington	Yes	53.1	0.0	53.1	1%
	3	Minnesota	Yes	27.9	37.2	65.0	1%
	4	Transmitter West	Yes	243.7	4.7	248.4	3%
Eastern	5	Deer Point	Yes	413.8	0.9	414.6	6%
	6	High Point	Yes	37.9	0.5	38.4	1%
	7	Star	Yes	2,751.6	9.7	2,761.4	38%
	8	Transmitter East	Yes	3,489.0	82.5	3,571.5	50%

Total	7,037.6	139.2	7,176.8	100%
Percent of Total	98%	2%	100%	
NOTE: Area estimates reflect all land within critical habitat unit boundaries; Area sizes may not sum due to rounding.				

The eight units we propose as critical habitat are broken into two groups, based on the western (Units 1 through 4) and eastern (Units 5 through 8) groups described in the SSA report (Service 2019, pp. 37–52). These two groups are distinguished by east-west genetic differentiation based on proximity to other populations and amounts of fragmentation within a population polygon. Below we describe each unit, and reasons why they meet the definition of critical habitat for the Panama City crayfish.

Western Group

The western group is comprised of four units supporting geographically isolated populations scattered throughout the species' range primarily in the cities of Panama City and Lynn Haven in Bay County, Florida. The Service proposes designation of 390.8 acres (158.2 hectares) in total for the western group. These populations have been isolated by residential and commercial development, which resulted in habitat loss and fragmentation. These populations are currently supported by an average of 83.4 acres (33.8 hectares) of habitat (range 24.3–248.4 acres (9.8–100.5 hectares)). However, the Transmitter West population is by far the largest at 248.4 acres (100.5 hectares), and this population may have historically been a critical link both genetically and geographically between the western and eastern representative groups. The remaining three populations are supported by an average of 50.3 acres (20.4 hectares) (range 24.3–65.0 acres (9.8–26.3 hectares)). Limited habitat area needed to support each population and lack of habitat connectivity to other populations in this group are the greatest management challenges.

Unit 1: 19th Street

The 19th Street population is the southwestern-most population located off 19th Street in Panama City, Florida. It is located on both sides of an active railroad track with habitat totaling 24.3 acres (9.8 hectares). Land ownership is mostly private, but some is in public ownership with 3.7 acres (1.5 hectares) owned by Bay County. Only secondary soils remain undeveloped, but the elevated railroad track has artificially provided a water barrier, often keeping the site ponded when all others have dried up. Maintenance (i.e., mowing and woody vegetation removal) for the railroad has kept the adjacent right-of-way covered in dense, herbaceous vegetation that is ideal for the Panama City crayfish. Adjacent unmanaged slash pine stands, where burrows have been documented, and a mowed grass field also provide habitat.

Panama City crayfish occurrence was documented in 2001, 2012–2014, and 2016–2018. All of the essential physical or biological features are found within the unit. The essential features (e.g., appropriate herbaceous groundcover vegetation and permanent or temporary pools of shallow fresh water) for this unit may require special management, particularly mowing, to ensure maintenance or improvement of the existing habitat.

Unit 2: Talkington

The Talkington population is located off of Jenks Avenue in Panama City, Florida, with habitat totaling 53.1 acres (21.5 hectares). Land ownership is entirely private, although 10 acres (4 hectares) is under easement for conservation. The Talkington Family Nature Preserve forms the centerpiece of this population, with land ownership held by the Bay County Conservancy (BCC), and the associated conservation easement held by Florida Department of Environmental Protection (FDEP). The preserve is primarily pine flatwoods with a cluster of pond pine trees in the center portion. The Service and FWC have a management agreement in place with BCC that allows for mowing to manage the habitat on a 2- to 3-year interval, to mimic the natural fire regime

and maintain ideal conditions for the Panama City crayfish. The remaining 43.1 acres (17.4 hectares) of core and secondary soils in the vicinity provide opportunity for additional land protections and management, although much of this area would require restoration of vegetation.

Panama City crayfish occurrence was documented in 2000, 2001, 2003, 2006, 2012, 2013, and 2016–2018. All essential physical and biological features are found within the unit. The essential features, especially appropriate herbaceous groundcover vegetation and permanent or temporary pools of shallow fresh water, for this unit may require special management; establishment of sloped swales and removal of dense shrub thickets would improve conditions for the Panama City crayfish in this unit.

Unit 3: Minnesota

The Minnesota population is located off Minnesota Avenue in Lynn Haven, Florida, with undeveloped habitat totaling 65.0 acres (26.3 hectares). Land ownership is a mix of private and public, and some area is under easement for conservation. This site is largely hardwood-cypress swamp with some possibilities for improving the habitat along 6 acres (2.4 hectares) near and adjacent to the swamp ecotone. The City of Lynn Haven owns 37.2 acres (15.1 hectares), which is under a conservation easement held by FDEP.

The Service and FWC have a management agreement with the City of Lynn Haven that allows the agencies to manage the property when funding is available. Minimal actions have occurred to date to remove some of the pine canopy layer. Other core and secondary soils surrounding the easement consist of dense slash pine plantations. The property has deep rutting from off-road vehicles, horses, and heavy equipment, which may affect the hydrology of the habitat.

Panama City crayfish occurrence was documented in 2015 and 2016. All essential physical and biological features are found within the unit. Achieving the right mosaic of water and grasses requires special management.

Unit 4: Transmitter West

The Transmitter West population is located off Transmitter Road in Lynn Haven and Panama City, Florida, with habitat totaling 248.4 acres (100.5 hectares). Land ownership is a mix of private and public, with approximately 40 percent under easement for conservation. The FDEP holds multiple conservation easements for private landowners with a total 100.5 acres (40.7 hectares) of pine flatwoods. The easements are managed as required by permit with either mowing or burning, and are in good condition for the Panama City crayfish. The remaining habitats, including the 4.7 acres (1.9 hectares) in public ownership owned by the City of Lynn Haven and Bay County, are in mixed condition and in need of regular management (e.g., prescribed fire or mowing).

Panama City crayfish occurrence was documented in 2004, 2013, and 2016. All essential physical and biological features are found within the unit, with grasses maintained by fire in the past and mowing more recently. Different depths of water bodies occur that provide a mosaic of water features with herbaceous grasses to make this a good area for the Panama City crayfish. Management is required to reduce encroaching shrubs and to remove tree debris caused by Hurricane Michael in October 2018.

Eastern Group

The eastern group is comprised of four units supporting populations scattered throughout the species' range primarily in the unincorporated portions of Bay County, Florida. The Service proposes designation of 6,785.9 acres (2,746.2 hectares) in total for the eastern group. These populations are currently supported by an average of 1,696.5 acres (686.5 hectares) of habitat (range 38.4–3,571.5 acres (15.5–1,445.3 hectares)). However, the Star and Transmitter East populations are the largest at 2,761.4 and 3,571.5 acres (1,117.5 and 1,445.3 hectares), respectively. These two populations represent the largest connected blocks of core and secondary soils with appropriate vegetation. Although the vegetation and hydrology have been altered from native wet prairie and

pine flatwoods habitats by silvicultural and agricultural uses, the geographic extent of these two populations forms the basis for the species' long-term resilience.

Unit 5: Deer Point

The Deer Point population occurs on a peninsula located near Bay County Road 2321 in Lynn Haven and Panama City, Florida, and is supported by 414.6 acres (167.8 hectares) of habitat. The land is bordered by Willams Bayou on the northeast, Mill Bayou on the southwest, and North Bay to the north. Land ownership is almost entirely private, although some areas under easement for conservation. Only 0.9 acres (0.4 hectares) is in public ownership by Bay County.

Four privately owned easements lie within or are adjacent to areas included in this unit. These easements protect 95.0 acres (38.4 hectares) of core and secondary soil habitat, although some of the secondary soil habitats do not meet the criteria for inclusion within critical habitat due to distance from core soils. The Trust for Public Lands holds 90.0 acres (36.4 hectares) under easement, but that easement is to be transferred to the City of Lynn Haven in the near future. FDEP holds three easements totaling 35.0 acres (14.2 hectares) that are still owned by a private landowner (D&H Properties, LLC). The Service and FWC hold a management agreement with D&H Properties, LLC, and have mowed and burned 24.0 acres (9.7 hectares) of this 35.0-acre (14.2-hectare) property that are held in easements by FDEP. The remaining habitat is on lands that are heavily timbered and unmanaged, resulting in dense overgrowth of titi and slash pine, and hydrology may be affected by these activities as well as borrow pits and dirt roads that traverse the unit. Only the portions of these easements that meet the criteria are included as critical habitat. All need regular management, especially the lands with dense vegetation, for the crayfish to thrive.

Panama City crayfish occurrence was documented on easement lands in 2012 and 2014–2018. All of the essential physical or biological features are found within the unit.

Herbaceous groundcover is spotty, and shallow pools of water are small and unreliable, often caused by vehicle tracks, and too deep for Panama City crayfish. Management is required to remove Hurricane Michael tree debris. Considerations on whether there are ways to improve the hydrology are also warranted.

Unit 6: High Point

The High Point population is the northern-most population and is located off Bay County Road 2311 in Bay County, Florida. The population is supported by habitat totaling 38.4 acres (15.5 hectares), and land ownership is almost entirely private, with some acreage under easement for conservation. Only 0.5 acres (0.2 hectares) is in public ownership by Bay County. The 11-acre (4.5 hectare) Marjorie's Magical Marsh-Symone's Sanctimonious Swamp conservation easement owned by BCC contains most of the known Panama City crayfish population.

Panama City crayfish occupy 6.0 (2.4 hectares) of the 11-acre (4.5 hectare) easement, which is in the process of being restored by the Service and FWC under a management agreement with BCC. These six acres are being restored to primarily herbaceous vegetation from a more recent dense mixture of titi shrub thicket in the under- and mid-story and slash pines in the overstory, which has lacked fire management. The remaining core and secondary soil habitat surrounding the easement was historically managed for timber but currently contains dense titi with an intermittent slash pine overstory.

Panama City crayfish occurrence was documented in 2010, 2012–2014, and 2015–2017. All essential physical and biological features are found within the unit. This population, albeit small, has herbaceous ground cover vegetation, pools of shallow water, and appropriate slope ratios, but the unit will require management to maintain the groundcover and keep shrubs from encroaching.

Unit 7: Star

A portion of this unit is located north of the intersection of Bay County Road 2321 and U.S. Highway 231 in Bay County, Florida. Land ownership is a mix of private and public. There are no conservation easements in place, but one 1.4-acre (0.6-hectare) parcel is owned by the State of Florida and used by the Florida Highway Patrol. Although the appropriate core and secondary soil habitat exists, the lands that run parallel to the county road are mostly in dense slash pine plantations for timber production with overgrown groundcover. The plantations east of the county road have been harvested recently. This management is sub-optimal for the Panama City crayfish because of the dense overstory canopy, lack of herbaceous ground cover, infrequent (>3 year) fire management, and bedding that may additionally affect the hydrology of the unit.

The remainder of this habitat unit is adjacent and south of U.S. Highway 231. It forms the farthest east-northeast boundary of the species' geographic range in Bay County, Florida. The population is bordered on the west by U.S. Highway 231, the north by Bayou George Creek, and the south by an unnamed tributary of Mill Bayou. These lands are mostly under timber management since the mid-1980s and in various stages of management from recent harvest to dense slash pines with dense titi shrub layers. The current timber management is sub-optimal for Panama City crayfish because of the dense overstory canopy, lack of herbaceous ground cover, infrequent (>3 year) fire management, and bedding that may additionally affect the hydrology of the unit. Land ownership is predominantly private, with only 9.7 acres (3.9 hectares) in public ownership by Bay County. Gulf Power Company manages rights-of-way along 86 acres (34.8 hectares). The Service and FWC have a management agreement with Gulf Power Company incorporating best management practices, primarily regular mowing, that have stimulated herbaceous vegetation as the primary groundcover. Currently a two-lane road, Star Avenue, bisects this population.

The population in the unit is supported by 2,761.4 acres (1,117.5 hectares).

Panama City crayfish occurrence was documented in 2001, 2003–2004, 2006, 2012–2013, and 2016. All essential physical and biological features are found within the unit. Intermittent herbaceous groundcover vegetation and temporary pools of shallow water with hardwood swamp ecotone areas do occur, but much management is required to maintain and improve these biological features needed for increased or more connected populations. Much tree debris remains throughout the unit as a result of Hurricane Michael's 2018 impact to the landscape. It is assumed that some debris will be removed from timber company land and on other small tracts of land, but it is unknown at this time what impacts are likely to occur to Panama City crayfish populations as lands are cleared at large-scale levels.

Unit 8: Transmitter East

The Transmitter East population forms the farthest south-southeast boundary of the species' geographic range in Bay County, Florida. The population is bordered on the west by Transmitter Road, the south by U.S. Highway 98 and State Highway 22, the east by Callaway Creek, and the north by an unnamed tributary of Mill Bayou. The population in this unit is supported by 3,571.5 acres (1,445.3 hectares) of habitat, which has been primarily under timber management since the mid-1980s and in various stages of management from recent harvest to dense slash pines with dense titi shrub layers.

The current management regime is sub-optimal for Panama City crayfish because of the dense overstory canopy, lack of herbaceous ground cover, infrequent (>3 year) fire management, and bedding that may additionally affect the hydrology of the unit. Land ownership is predominantly private, with only 82.5 acres (33.4 hectares) in public ownership by the City of Springfield, Bay County, and the State of Florida. Gulf Power Company manages rights-of-way along approximately 114 acres (46.1 hectares) of land that is populated with the Panama City crayfish. The Service and FWC have a management agreement with Gulf Power incorporating best management practices,

primarily regular mowing, that have stimulated herbaceous vegetation as the primary groundcover.

Two conservation easements, 11.3 and 7.3 acres (4.6 and 3.0 hectares) in size, are held by FDEP for two separate landowners. Currently, a two-lane road, Star Avenue, bisects this population. Tram Road also bisects the lower third of the area. It is currently a dirt road and there are plans for converting it to a four-lane asphalt road.

Panama City crayfish occurrence was confirmed in 2001, 2002, and 2006, and extensive efforts documented the species in 2003–2004, 2012–2013, and 2016. All essential physical and biological features are found within the unit. Much tree debris, which will require management, remains throughout as a result of Hurricane Michael's 2018 impact to the landscape. It is assumed that some debris will be removed from timber company land and on other small tracts of land, but it is unknown at this time what impacts are likely to occur on the Panama City crayfish populations as lands are cleared at large-scale levels.

Effects of Critical Habitat Designation

Section 7 Consultation

Section 7(a)(2) of the Act requires Federal agencies, including the Service, to ensure that any action they fund, authorize, or carry out is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of designated critical habitat of such species. In addition, section 7(a)(4) of the Act requires Federal agencies to confer with the Service on any agency action which is likely to jeopardize the continued existence of any species proposed to be listed under the Act or result in the destruction or adverse modification of proposed critical habitat.

We published a final rule revising the definition of destruction or adverse modification on August 27, 2019 (84 FR 44976). Destruction or adverse modification

means a direct or indirect alteration that appreciably diminishes the value of critical habitat as a whole for the conservation of a listed species.

If a Federal action may affect a listed species or its critical habitat, the responsible Federal agency (action agency) must enter into consultation with us. Examples of actions that are subject to the section 7 consultation process are actions on State, Tribal, local, or private lands that require a Federal permit (such as a permit from the U.S. Army Corps of Engineers under section 404 of the Clean Water Act (33 U.S.C. 1251 *et seq.*) or a permit from the Service under section 10 of the Act) or that involve some other Federal action (such as funding from the Federal Highway Administration, Federal Aviation Administration, or the Federal Emergency Management Agency). Federal actions not affecting listed species or critical habitat and actions on State, Tribal, local, or private lands that are not federally funded, authorized, or carried out by a Federal agency do not require section 7 consultation. Compliance with the requirements of section 7(a)(2) is documented through our issuance of:

(1) A concurrence letter for Federal actions that may affect, but are not likely to adversely affect, listed species or critical habitat; or

(2) A biological opinion for Federal actions that may affect, and are likely to adversely affect, listed species or critical habitat.

When we issue a biological opinion concluding that a project is likely to jeopardize the continued existence of a listed species and/or destroy or adversely modify critical habitat, we provide reasonable and prudent alternatives to the project, if any are identifiable, that would avoid the likelihood of jeopardy and/or destruction or adverse modification of critical habitat. We define “reasonable and prudent alternatives” (at 50 CFR 402.02) as alternative actions identified during consultation that:

(1) Can be implemented in a manner consistent with the intended purpose of the action,

(2) Can be implemented consistent with the scope of the Federal agency's legal authority and jurisdiction,

(3) Are economically and technologically feasible, and

(4) Would, in the Service Director's opinion, avoid the likelihood of jeopardizing the continued existence of the listed species and/or avoid the likelihood of destroying or adversely modifying critical habitat.

Reasonable and prudent alternatives can vary from slight project modifications to extensive redesign or relocation of the project. Costs associated with implementing a reasonable and prudent alternative are similarly variable.

Regulations at 50 CFR 402.16 set forth requirements for Federal agencies to reinitiate formal consultation on previously reviewed actions. These requirements apply when the Federal agency has retained discretionary involvement or control over the action (or the agency's discretionary involvement or control is authorized by law) and, subsequent to the previous consultation, we have listed a new species or designated critical habitat that may be affected by the Federal action, the action has been modified in a manner that affects the species or critical habitat in a way not considered in the previous consultation, new information reveals effects of the action may affect the species or critical habitat in a way not previously considered, or incidental take is exceeded. In such situations, Federal agencies sometimes may need to request reinitiation of consultation with us, but the regulations also specify some exceptions to the requirement to reinitiate consultation on specific land management plans after subsequently listing a new species or designating new critical habitat. See the regulations for a description of those exceptions.

Application of the "Destruction or Adverse Modification" Standard

The key factor related to the destruction or adverse modification determination is whether implementation of the proposed Federal action directly or indirectly alters the

designated critical habitat in a way that appreciably diminishes the value of the critical habitat as a whole for the conservation of the listed species. As discussed above, the role of critical habitat is to support physical or biological features essential to the conservation of a listed species and provide for the conservation of the species.

Section 4(b)(8) of the Act requires us to briefly evaluate and describe, in any proposed or final regulation that designates critical habitat, activities involving a Federal action that may violate section 7(a)(2) of the Act by destroying or adversely modifying such habitat, or that may be affected by such designation.

Activities that the Services may, during a consultation under section 7(a)(2) of the Act, find are likely to destroy or adversely modify critical habitat include, but are not limited to:

(1) Actions that would significantly alter hydrological and soil characteristics. Such activities could include, but are not limited to, those that result in wetland fill or draining or, conversely, provide additional waters to the wetland. Activities drying the wetland (via fill or draining) can result in changes in depth to water tables that are less than the depth threshold that is important for long-term Panama City crayfish population persistence. These activities can also alter soils from those that provide the sediment structure needed to allow for burrow construction down to the water table and also support the herbaceous vegetation upon which the species relies for food and cover. Activities providing additional water can allow other crayfish species that persist in deeper waters to outcompete the Panama City crayfish.

(2) Actions that would significantly alter water quality parameters including oxygen content, temperature, and chemical composition. Such activities could include, but are not limited to, release of chemicals, excess nutrients, pesticides, and biological or other pollutants into the surface water or connected groundwater at a point source or by dispersed release (non-point source). These activities could alter water conditions to

levels that are beyond the tolerances of the crayfish and result in direct or cumulative adverse effects to these individuals and their life cycles.

(3) Actions that would significantly and permanently alter vegetative characteristics. Such activities could include, but are not limited to, residential and commercial construction; road construction; and draining, filling or otherwise destroying or altering wetlands. These activities may lead to changes in hydrology and soil characteristics that prevent the appropriate vegetation from growing. These activities can result in an absence or reduced levels of herbaceous vegetation that is important to the Panama City crayfish for food, detritus formation, and cover.

Exemptions

Application of Section 4(a)(3) of the Act

Section 4(a)(3)(B)(i) of the Act (16 U.S.C. 1533(a)(3)(B)(i)) provides that the Secretary shall not designate as critical habitat any lands or other geographical areas owned or controlled by the Department of Defense (DoD), or designated for its use, that are subject to an integrated natural resources management plan (INRMP) prepared under section 101 of the Sikes Act (16 U.S.C. 670a), if the Secretary determines in writing that such plan provides a benefit to the species for which critical habitat is proposed for designation. There are no DoD lands with a completed INRMP within the proposed critical habitat designation.

Consideration of Exclusions under Section 4(b)(2) of the Act

Section 4(b)(2) of the Act states that the Secretary shall designate and make revisions to critical habitat on the basis of the best available scientific data after taking into consideration the economic impact, national security impact, and any other relevant impact of specifying any particular area as critical habitat. The Secretary may exclude an area from critical habitat if he determines that the benefits of such exclusion outweigh the benefits of specifying such area as part of the critical habitat, unless he determines, based

on the best scientific data available, that the failure to designate such area as critical habitat will result in the extinction of the species. In making the determination to exclude a particular area, the plain language of the statute, as well as the legislative history, make clear that the Secretary has broad discretion regarding which factor(s) to use and how much weight to give to any factor.

We describe below the process that we undertook for taking into consideration each category of impacts and our analyses of the relevant impacts.

Consideration of Economic Impacts

Section 4(b)(2) of the Act and its implementing regulations require that we consider the economic impact that may result from a designation of critical habitat. To assess the probable economic impacts of a designation, we must first evaluate specific land uses or activities and projects that may occur in the area of the critical habitat. We then must evaluate the impacts that a specific critical habitat designation may have on restricting or modifying specific land uses or activities for the benefit of the species and its habitat within the areas proposed. We then identify which conservation efforts may be the result of the species being listed under the Act versus those attributed solely to the designation of critical habitat for this particular species. The probable economic impact of a proposed critical habitat designation is analyzed by comparing scenarios both “with critical habitat” and “without critical habitat.”

The “without critical habitat” scenario represents the baseline for the analysis, which includes the existing regulatory and socio-economic burden imposed on landowners, managers, or other resource users potentially affected by the designation of critical habitat (e.g., under the Federal listing as well as other Federal, State, and local regulations). The baseline, therefore, represents the costs of all efforts attributable to the listing of the species under the Act (i.e., conservation of the species and its habitat incurred regardless of whether critical habitat is designated). The “with critical habitat”

scenario describes the incremental impacts associated specifically with the designation of critical habitat for the species. The incremental conservation efforts and associated impacts would not be expected without the designation of critical habitat for the species. In other words, the incremental costs are those attributable solely to the designation of critical habitat, above and beyond the baseline costs. These are the costs we use when evaluating the benefits of inclusion and exclusion of particular areas from the final designation of critical habitat should we choose to conduct a discretionary 4(b)(2) exclusion analysis.

For this particular designation, we developed an incremental effects memorandum (IEM) considering the probable incremental economic impacts that may result from this proposed designation of critical habitat. The information contained in our IEM was then used to develop a screening analysis of the probable effects of the designation of critical habitat for the Panama City crayfish (IEC 2018). We began by conducting a screening analysis of the proposed designation of critical habitat in order to focus our analysis on the key factors that are likely to result in incremental economic impacts. The purpose of the screening analysis is to filter out particular geographic areas of critical habitat that are already subject to such protections and are, therefore, unlikely to incur incremental economic impacts. In particular, the screening analysis considers baseline costs (i.e., absent critical habitat designation) and includes probable economic impacts where land and water use may be subject to conservation plans, land management plans, best management practices, or regulations that protect the habitat area as a result of the Federal listing status of the species. Ultimately, the screening analysis allows us to focus our analysis on evaluating the specific areas or sectors that may incur probable incremental economic impacts as a result of the designation. If there are any unoccupied units in the proposed critical habitat designation, the screening analysis assesses whether any additional management or conservation efforts may incur incremental economic

impacts. This screening analysis combined with the information contained in our IEM are what we consider our draft economic analysis (DEA) of the proposed critical habitat designation for the Panama City crayfish; our DEA is summarized in the narrative below.

Executive Orders (E.O.s) 12866 and 13563 direct Federal agencies to assess the costs and benefits of available regulatory alternatives in quantitative (to the extent feasible) and qualitative terms. Consistent with the E.O. regulatory analysis requirements, our effects analysis under the Act may take into consideration impacts to both directly and indirectly affected entities, where practicable and reasonable. If sufficient data are available, we assess to the extent practicable the probable impacts to both directly and indirectly affected entities. As part of our screening analysis, we considered the types of economic activities that are likely to occur within the areas likely affected by the critical habitat designation. In our evaluation of the probable incremental economic impacts that may result from the proposed designation of critical habitat for the Panama City crayfish, first we identified, in the IEM dated July 13, 2018, probable incremental economic impacts associated with the following categories of activities: agriculture, forest management (silviculture, timber), development, recreation, restoration and conservation management activities, transportation, and utilities. We considered each industry or category individually. Additionally, we considered whether their activities have any Federal involvement. Critical habitat designation generally will not affect activities that do not have any Federal involvement; under the Act, designation of critical habitat only affects activities conducted, funded, permitted, or authorized by Federal agencies. If we finalize our proposal to list the species, in areas where the Panama City crayfish is present, Federal agencies would be required to consult with the Service under section 7 of the Act on activities they fund, permit, or implement that may affect the species. If we finalize this proposed critical habitat designation, consultations to avoid the destruction or adverse modification of critical habitat would be incorporated into the existing

consultation process.

In our IEM, we attempted to clarify the distinction between the effects that would result from the species being listed and those attributable to the critical habitat designation (i.e., difference between the jeopardy and adverse modification standards) for the Panama City crayfish's critical habitat. Because the proposed critical habitat for the Panama City crayfish coincides with currently occupied areas by the species, it has been our experience that it is more difficult to discern which conservation efforts are attributable to the species being listed and those which will result solely from the designation of critical habitat. However, the following specific circumstances in this case help to inform our evaluation: (1) The essential physical or biological features identified for critical habitat are the same features essential for the life requisites of the species, and (2) any actions that would result in sufficient harm or harassment to constitute jeopardy to the Panama City crayfish would also likely adversely affect the essential physical or biological features of critical habitat. The IEM outlines our rationale concerning this limited distinction between baseline conservation efforts and incremental impacts of the designation of critical habitat for this species. This evaluation of the incremental effects has been used as the basis to evaluate the probable incremental economic impacts of this proposed designation of critical habitat.

The proposed critical habitat designation for the Panama City crayfish includes eight units, each of which contains one geographically and/or genetically distinct population of the Panama City crayfish. All of these units are in Bay County, Florida, and none occur on Federal lands. For the purposes of critical habitat designation, we determined a unit to be occupied if it contains recent (i.e., observed since 2015) observations of Panama City crayfish. All units are occupied because they contain populations of Panama City crayfish at the time of proposed listing, and each unit is considered essential to the conservation of the species. In total, we are proposing 7,177

acres (2,904 hectares) for designation as critical habitat for the Panama City crayfish. In occupied areas, any actions that may affect the species or its habitat would also affect critical habitat, and it is unlikely that any additional conservation efforts would be recommended to address the adverse modification standard over and above those recommended as necessary to avoid jeopardizing the continued existence of the Panama City crayfish. Incremental costs of the proposed critical habitat designation for the Panama City crayfish are likely to be limited to additional administrative costs to consider adverse modification in consultations in all units. The incremental administrative burden resulting from the designation of critical habitat for the Panama City crayfish is not anticipated to reach an annual effect of \$100 million (which is the economic threshold for a “significant regulatory action” (see section 3(f)(1) of Executive Order 12866)) based on the anticipated annual number of consultations and associated consultation costs, which are not expected to exceed \$60,000 in any year. The designation is unlikely to trigger additional requirements under State or local regulations and is not expected to have perceptual effects.

We are soliciting data and comments from the public on the DEA discussed above, as well as all aspects of this proposed rule and our required determinations. During the development of a final designation, we will consider the information presented in the DEA and any additional information on economic impacts we receive during the public comment period to determine whether any specific areas should be excluded from the final critical habitat designation under authority of section 4(b)(2) of the Act and our implementing regulations at 50 CFR 424.19. In particular, we may exclude an area from critical habitat if we determine that the benefits of excluding the area outweigh the benefits of including the area, provided the exclusion will not result in the extinction of this species.

Consideration of National Security Impacts

Section 4(a)(3)(B)(i) of the Act may not cover all DoD lands or areas that pose potential national-security concerns (e.g., a DoD installation that is in the process of revising its INRMP for a newly listed species or a species previously not covered). If a particular area is not covered under section 4(a)(3)(B)(i), national-security or homeland-security concerns are not a factor in the process of determining what areas meet the definition of “critical habitat.” Nevertheless, when designating critical habitat under section 4(b)(2), the Service must consider impacts on national security, including homeland security, on lands or areas not covered by section 4(a)(3)(B)(i). Accordingly, we will always consider for exclusion from the designation areas for which DoD, Department of Homeland Security (DHS), or another Federal agency has requested exclusion based on an assertion of national-security or homeland-security concerns.

We cannot, however, automatically exclude requested areas. When DoD, DHS, or another Federal agency requests exclusion from critical habitat on the basis of national-security or homeland-security impacts, it must provide a reasonably specific justification of an incremental impact on national security that would result from the designation of that specific area as critical habitat. That justification could include demonstration of probable impacts, such as impacts to ongoing border-security patrols and surveillance activities, or a delay in training or facility construction, as a result of compliance with section 7(a)(2) of the Act. If the agency requesting the exclusion does not provide us with a reasonably specific justification, we will contact the agency to recommend that it provide a specific justification or clarification of its concerns relative to the probable incremental impact that could result from the designation. If the agency provides a reasonably specific justification, we will defer to the expert judgment of DoD, DHS, or another Federal agency as to: (1) Whether activities on its lands or waters, or its activities on other lands or waters, have national-security or homeland-security implications; (2) the importance of those implications; and (3) the degree to which the cited implications

would be adversely affected in the absence of an exclusion. In that circumstance, in conducting a discretionary section 4(b)(2) exclusion analysis, we will give great weight to national-security and homeland-security concerns in analyzing the benefits of exclusion.

In preparing this proposal, we have determined that the lands within the proposed designation of critical habitat for Panama City crayfish are not owned, managed, or used by the DoD or DHS, and, therefore, we anticipate no impact on national security or homeland security. However, during the development of a final designation, we will consider any additional information received through the public comment period on the impacts of the proposed designation on national security or homeland security to determine whether any specific areas should be excluded from the final critical habitat designation under authority of section 4(b)(2) and our implementing regulations at 50 CFR 424.19.

Consideration of Other Relevant Impacts

Under section 4(b)(2) of the Act, we consider any other relevant impacts, in addition to economic impacts and impacts on national security discussed above. We consider a number of factors, including whether there are permitted conservation plans covering the species in the area such as HCPs, safe harbor agreements (SHAs), or candidate conservation agreements with assurances (CCAAs), or whether there are non-permitted conservation agreements and partnerships that would be encouraged by designation of, or exclusion from, critical habitat. In addition, we look at the existence of Tribal conservation plans and partnerships and consider the government-to-government relationship of the United States with Tribal entities. We also consider any social impacts that might occur because of the designation.

In preparing this proposal, we have determined that there are currently no HCPs or other management plans for the Panama City crayfish, and the proposed designation

does not include any Tribal lands or trust resources. We anticipate no impact on Tribal lands, partnerships, or HCPs from this proposed critical habitat designation.

Additionally, as described above, we are not considering excluding any particular areas from critical habitat on the basis of impacts to national security or economic impacts.

However, during the development of a final designation, we will consider any additional information we receive through the public comment period regarding other relevant impacts of the proposed designation and will determine whether any specific areas should be excluded from the final critical habitat designation under authority of section 4(b)(2) and our implementing regulations at 50 CFR 424.19.

Required Determinations

Clarity of the Rule

We are required by Executive Orders 12866 and 12988 and by the Presidential Memorandum of June 1, 1998, to write all rules in plain language. This means that each rule we publish must:

- (1) Be logically organized;
- (2) Use the active voice to address readers directly;
- (3) Use clear language rather than jargon;
- (4) Be divided into short sections and sentences; and
- (5) Use lists and tables wherever possible.

If you feel that we have not met these requirements, send us comments by one of the methods listed in **ADDRESSES**. To better help us revise the rule, your comments should be as specific as possible. For example, you should tell us the numbers of the sections or paragraphs that are unclearly written, which sections or sentences are too long, the sections where you feel lists or tables would be useful, etc.

Regulatory Planning and Review (Executive Orders 12866 and 13563)

Executive Order 12866 provides that the Office of Information and Regulatory Affairs (OIRA) will review all significant rules. OIRA has determined that this rule is not significant.

Executive Order 13563 reaffirms the principles of E.O. 12866 while calling for improvements in the nation's regulatory system to promote predictability, to reduce uncertainty, and to use the best, most innovative, and least burdensome tools for achieving regulatory ends. The executive order directs agencies to consider regulatory approaches that reduce burdens and maintain flexibility and freedom of choice for the public where these approaches are relevant, feasible, and consistent with regulatory objectives. E.O. 13563 emphasizes further that regulations must be based on the best available science and that the rulemaking process must allow for public participation and an open exchange of ideas. We have developed this rule in a manner consistent with these requirements.

Regulatory Flexibility Act (5 U.S.C. 601 et seq.)

Under the Regulatory Flexibility Act (RFA; 5 U.S.C. 601 *et seq.*), as amended by the Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA; 5 U.S.C. 801 *et seq.*), whenever an agency is required to publish a notice of rulemaking for any proposed or final rule, it must prepare and make available for public comment a regulatory flexibility analysis that describes the effects of the rule on small entities (i.e., small businesses, small organizations, and small government jurisdictions). However, no regulatory flexibility analysis is required if the head of the agency certifies the rule will not have a significant economic impact on a substantial number of small entities. The SBREFA amended the RFA to require Federal agencies to provide a certification statement of the factual basis for certifying that the rule will not have a significant economic impact on a substantial number of small entities.

According to the Small Business Administration, small entities include small

organizations such as independent nonprofit organizations; small governmental jurisdictions, including school boards and city and town governments that serve fewer than 50,000 residents; and small businesses (13 CFR 121.201). Small businesses include manufacturing and mining concerns with fewer than 500 employees, wholesale trade entities with fewer than 100 employees, retail and service businesses with less than \$5 million in annual sales, general and heavy construction businesses with less than \$27.5 million in annual business, special trade contractors doing less than \$11.5 million in annual business, and agricultural businesses with annual sales less than \$750,000. To determine if potential economic impacts to these small entities are significant, we considered the types of activities that might trigger regulatory impacts under this designation as well as types of project modifications that may result. In general, the term “significant economic impact” is meant to apply to a typical small business firm’s business operations.

Under the RFA, as amended, and as understood in light of recent court decisions, Federal agencies are required to evaluate the potential incremental impacts of rulemaking on those entities directly regulated by the rulemaking itself; in other words, the RFA does not require agencies to evaluate the potential impacts to indirectly regulated entities. The regulatory mechanism through which critical habitat protections are realized is section 7 of the Act, which requires Federal agencies, in consultation with the Service, to ensure that any action authorized, funded, or carried out by the agency is not likely to destroy or adversely modify critical habitat. Therefore, under section 7, only Federal action agencies are directly subject to the specific regulatory requirement (avoiding destruction and adverse modification) imposed by critical habitat designation. Consequently, it is our position that only Federal action agencies would be directly regulated if we adopt the proposed critical habitat designation. There is no requirement under the RFA to evaluate the potential impacts to entities not directly regulated. Moreover, Federal agencies are not

small entities. Therefore, because no small entities would be directly regulated by this rulemaking, the Service certifies that, if made final as proposed, the proposed critical habitat designation will not have a significant economic impact on a substantial number of small entities.

In summary, we have considered whether the proposed designation would result in a significant economic impact on a substantial number of small entities. For the above reasons and based on currently available information, we certify that, if made final, the proposed critical habitat designation would not have a significant economic impact on a substantial number of small business entities. Therefore, an initial regulatory flexibility analysis is not required.

Energy Supply, Distribution, or Use—Executive Order 13211

Executive Order 13211 (Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use) requires agencies to prepare Statements of Energy Effects when undertaking certain actions. In our economic analysis, we did not find that the designation of this proposed critical habitat would significantly affect energy supplies, distribution, or use because these were not identified as land use sectors within the critical habitat areas. Therefore, this action is not a significant energy action, and no Statement of Energy Effects is required.

Unfunded Mandates Reform Act (2 U.S.C. 1501 et seq.)

In accordance with the Unfunded Mandates Reform Act (2 U.S.C. 1501 et seq.), we make the following finding:

(1) This proposed rule would not produce a Federal mandate. In general, a Federal mandate is a provision in legislation, statute, or regulation that would impose an enforceable duty upon State, local, or tribal governments, or the private sector, and includes both “Federal intergovernmental mandates” and “Federal private sector mandates.” These terms are defined in 2 U.S.C. 658(5)–(7). “Federal intergovernmental

mandate” includes a regulation that “would impose an enforceable duty upon State, local, or tribal governments” with two exceptions. It excludes “a condition of Federal assistance.” It also excludes “a duty arising from participation in a voluntary Federal program,” unless the regulation “relates to a then-existing Federal program under which \$500,000,000 or more is provided annually to State, local, and tribal governments under entitlement authority,” if the provision would “increase the stringency of conditions of assistance” or “place caps upon, or otherwise decrease, the Federal Government’s responsibility to provide funding,” and the State, local, or tribal governments “lack authority” to adjust accordingly. At the time of enactment, these entitlement programs were: Medicaid; Aid to Families with Dependent Children work programs; Child Nutrition; Food Stamps; Social Services Block Grants; Vocational Rehabilitation State Grants; Foster Care, Adoption Assistance, and Independent Living; Family Support Welfare Services; and Child Support Enforcement. “Federal private sector mandate” includes a regulation that “would impose an enforceable duty upon the private sector, except (i) a condition of Federal assistance or (ii) a duty arising from participation in a voluntary Federal program.”

The designation of critical habitat does not impose a legally binding duty on non-Federal Government entities or private parties. Under the Act, the only regulatory effect is that Federal agencies must ensure that their actions do not destroy or adversely modify critical habitat under section 7. While non-Federal entities that receive Federal funding, assistance, or permits, or that otherwise require approval or authorization from a Federal agency for an action, may be indirectly impacted by the designation of critical habitat, the legally binding duty to avoid destruction or adverse modification of critical habitat rests squarely on the Federal agency. Furthermore, to the extent that non-Federal entities are indirectly impacted because they receive Federal assistance or participate in a voluntary Federal aid program, the Unfunded Mandates Reform Act would not apply, nor would

critical habitat shift the costs of the large entitlement programs listed above onto State governments.

(2) We do not believe that this rule would significantly or uniquely affect small governments. Small governments will be affected only to the extent that any programs having Federal funds, permits, or other authorized activities must ensure that their actions will not adversely affect the critical habitat. Therefore, a Small Government Agency Plan is not required.

Takings—Executive Order 12630

In accordance with E.O. 12630 (Government Actions and Interference with Constitutionally Protected Private Property Rights), we have analyzed the potential takings implications of designating critical habitat for the Panama City crayfish in a takings implications assessment. The Act does not authorize the Service to regulate private actions on private lands or confiscate private property as a result of critical habitat designation. Designation of critical habitat does not affect land ownership, or establish any closures, or restrictions on use of or access to the designated areas. Furthermore, the designation of critical habitat does not affect landowner actions that do not require Federal funding or permits, nor does it preclude development of habitat conservation programs or issuance of incidental take permits to permit actions that do require Federal funding or permits to go forward. However, Federal agencies are prohibited from carrying out, funding, or authorizing actions that would destroy or adversely modify critical habitat. A takings implications assessment has been completed for the proposed designation of critical habitat for the Panama City crayfish, and it concludes that, if adopted, this designation of critical habitat does not pose significant takings implications for lands within or affected by the designation.

Federalism—Executive Order 13132

In accordance with E.O. 13132 (Federalism), this proposed rule does not have

significant Federalism effects. A federalism summary impact statement is not required. In keeping with Department of the Interior and Department of Commerce policy, we requested information from, and coordinated development of this proposed critical habitat designation with, appropriate State resource agencies. From a federalism perspective, the designation of critical habitat directly affects only the responsibilities of Federal agencies. The Act imposes no other duties with respect to critical habitat, either for States and local governments, or for anyone else. As a result, the proposed rule does not have substantial direct effects either on the States, or on the relationship between the national government and the States, or on the distribution of powers and responsibilities among the various levels of government. The proposed designation may have some benefit to these governments because the areas that contain the features essential to the conservation of the species are more clearly defined, and the physical or biological features of the habitat necessary for the conservation of the species are specifically identified. This information does not alter where and what federally sponsored activities may occur. However, it may assist State and local governments in long-range planning because they no longer have to wait for case-by-case section 7 consultations to occur.

Where State and local governments require approval or authorization from a Federal agency for actions that may affect critical habitat, consultation under section 7(a)(2) of the Act would be required. While non-Federal entities that receive Federal funding, assistance, or permits, or that otherwise require approval or authorization from a Federal agency for an action, may be indirectly impacted by the designation of critical habitat, the legally binding duty to avoid destruction or adverse modification of critical habitat rests squarely on the Federal agency.

Civil Justice Reform—Executive Order 12988

In accordance with Executive Order 12988 (Civil Justice Reform), the Office of the Solicitor has determined that the rule does not unduly burden the judicial system and

that it meets the requirements of sections 3(a) and 3(b)(2) of the Order. We have proposed designating critical habitat in accordance with the provisions of the Act. To assist the public in understanding the habitat needs of the species, this proposed rule identifies the elements of physical or biological features essential to the conservation of the species. The proposed areas of critical habitat are presented on maps, and the proposed rule provides several options for the interested public to obtain more detailed location information, if desired.

Paperwork Reduction Act of 1995 (44 U.S.C. 3501 et seq.)

This rule does not contain information collection requirements, and a submission to the Office of Management and Budget (OMB) under the Paperwork Reduction Act of 1995 (44 U.S.C. 3501 *et seq.*) is not required. We may not conduct or sponsor and you are not required to respond to a collection of information unless it displays a currently valid OMB control number.

National Environmental Policy Act (42 U.S.C. 4321 et seq.)

It is our position that, outside the jurisdiction of the U.S. Court of Appeals for the Tenth Circuit, we do not need to prepare environmental analyses pursuant to the National Environmental Policy Act (NEPA; 42 U.S.C. 4321 *et seq.*) in connection with regulations adopted pursuant to section 4(a) of the Act. We published a notice outlining our reasons for this determination in the *Federal Register* on October 25, 1983 (48 FR 49244). This position was upheld by the U.S. Court of Appeals for the Ninth Circuit (*Douglas County v. Babbitt*, 48 F.3d 1495 (9th Cir. 1995), cert. denied 516 U.S. 1042 (1996)).

Government-to-Government Relationship with Tribes

In accordance with the President's memorandum of April 29, 1994 (Government-to-Government Relations with Native American Tribal Governments; 59 FR 22951), Executive Order 13175 (Consultation and Coordination with Indian Tribal Governments), and the Department of the Interior's manual at 512 DM 2, we readily acknowledge our

responsibility to communicate meaningfully with recognized Federal Tribes on a government-to-government basis. In accordance with Secretarial Order 3206 of June 5, 1997 (American Indian Tribal Rights, Federal-Tribal Trust Responsibilities, and the Endangered Species Act), we readily acknowledge our responsibilities to work directly with Tribes in developing programs for healthy ecosystems, to acknowledge that Tribal lands are not subject to the same controls as Federal public lands, to remain sensitive to Indian culture, and to make information available to Tribes. We have determined that no Tribal lands fall within the boundaries of the proposed critical habitat for the Panama City crayfish, so no Tribal lands would be affected by the proposed designation.

References Cited

A complete list of references cited in this rulemaking is available on the Internet at <http://www.regulations.gov> and upon request from the Panama City Field Office (see

FOR FURTHER INFORMATION CONTACT).

Authors

The primary authors of this proposed rulemaking are the staff members of the Fish and Wildlife Service's Species Assessment Team and the Florida Ecological Services Field Office.

List of Subjects in 50 CFR Part 17

Endangered and threatened species, Exports, Imports, Reporting and recordkeeping requirements, Transportation.

Proposed Regulation Promulgation

Accordingly, we propose to amend part 17, subchapter B of chapter I, title 50 of the Code of Federal Regulations, as set forth below:

PART 17—ENDANGERED AND THREATENED WILDLIFE AND PLANTS

1. The authority citation for part 17 continues to read as follows:

AUTHORITY: 16 U.S.C. 1361-1407; 1531-1544; and 4201-4245, unless otherwise

noted.

2. Amend § 17.46 by adding paragraph (d) to read as follows:

§ 17.46 Special rules—crustaceans.

* * * * *

(d) Panama City Crayfish (*Procambarus econfinae*)—(1) *Prohibitions*. The following prohibitions that apply to endangered wildlife also apply to the Panama City crayfish. Except as provided under paragraph (d)(2) of this section and §§ 17.4 and 17.5, it is unlawful for any person subject to the jurisdiction of the United States to commit, to attempt to commit, to solicit another to commit, or cause to be committed, any of the following acts in regard to these species:

(i) Import or export, as set forth at § 17.21(b) for endangered wildlife.

(ii) Take, as set forth at § 17.21(c)(1) for endangered wildlife.

(iii) Possession and other acts with unlawfully taken specimens, as set forth at § 17.21(d)(1) for endangered wildlife.

(iv) Interstate or foreign commerce in the course of a commercial activity, as set forth at § 17.21(e) for endangered wildlife.

(v) Sale or offer for sale, as set forth at § 17.21(f) for endangered wildlife.

(2) *Exceptions from prohibitions*. In regard to this species, you may:

(i) Conduct activities as authorized by a permit under §17.32.

(ii) Take, as set forth at § 17.21(c)(2) through (c)(4) for endangered wildlife.

(iii) Take as set forth at § 17.31(b).

(iv) Take incidental to an otherwise lawful activity caused by:

(A) Conservation and restoration efforts by the Service or State wildlife agencies, including, but not limited to, collection of broodstock, tissue collection for genetic analysis, captive propagation, subsequent stocking into unoccupied areas within the historical range of the species and follow-up monitoring, and actions necessary to aid a

sick, injured, or orphaned specimen, to dispose of a dead specimen, or to salvage a dead specimen which may be useful for scientific study.

(B) Development practices that:

(1) Maintain existing structures and construction or reconstruction activities that occur within the existing footprint of previously developed areas;

(2) Build new structures that occur within 100 feet of existing structures on an individual private landowner's property and with a new footprint less than 1,000 square feet, such as a pool or shed associated with an existing house;

(3) Install culverts for individual landowners not associated with housing developments on lands greater than one acre;

(4) Build platforms or boardwalks for recreational purposes on conservation lands that allow sunlight of sufficient levels to maintain herbaceous groundcover;

(5) Build paths used for nonmotorized activities as long as the project footprint, including construction impacts, alter no more than 5 percent of the acreage in core or secondary soils within lands under a conservation easement.

(C) Certain land management activities, including:

(1) Silvicultural (forestry) activities located in secondary soils that follow state best management practices (BMPs);

(2) Prescribed burning and wildfire control efforts when following state BMPs, guidelines, or permit conditions;

(3) Herbicide application activities targeting exotic plants or shrub species when following all other state and federal BMPs, guidelines, or permit conditions;

(4) Agricultural maintenance activities in pasture and rangelands (including cattle operations) that were established prior to January 3, 2018, that do not have indirect impacts to adjacent Panama City crayfish habitat.

(D) Utility actions, including:

(1) Ditch mowing and maintenance outside of critical habitat units;

(2) Ditch mowing or maintenance within critical habitat units after coordination with the local FWS office;

(3) Culvert replacements or maintenance on individual landowner properties that do not adversely affect, but improve or restore, the natural hydrology;

(4) After coordination with the local FWS office the following: maintenance associated with rights-of-way or powerlines, powerline and pole placements and replacements, and directional boring

(v) Possess and engage in other acts with unlawfully taken wildlife, as set forth at § 17.21(d)(2) for endangered wildlife.

3. Amend § 17.95(h) by adding an entry for “Panama City Crayfish (*Procambarus econfinae*)”, in the same alphabetical order that it appears in the table at § 17.11(h), to read as follows:

§ 17.95 Critical habitat—fish and wildlife.

* * * * *

(h) * * *

Panama City Crayfish (*Procambarus econfinae*)

(1) Critical habitat units are depicted for Bay County, Florida, on the maps below.

(2) Within these areas, the physical or biological features essential to the conservation of Panama City crayfish consist of the following components:

(i) Undeveloped lands, including cropland, utilities rights-of-way, timberlands, and grazing lands, that support open wet pine flatwoods and wet prairie habitats that contain the following:

(A) Appropriate herbaceous groundcover vegetation;

(B) Permanent or temporary pools of shallow (usually less than 1 foot) freshwater

locations; and

(C) Gently-sloped ground level swales with a 3:1 or shallower slope ratio along ecotonal areas.

(ii) Soil types within undeveloped lands that provide sediment structure needed for burrow construction and that support mostly native herbaceous vegetation needed for food and cover, and where the ground water is always within 3 feet of the ground surface and surface waters occur on occasion. These soil types include:

(A) Core soils for Panama City crayfish, including Pamlico-Dorovan Complex, Rutlege Sand, Plummer Sand, Pelham Sand, Pantego Sandy Loam, and Rutledge-Pamlico Complex;

(B) Secondary soils within 100 meters (328 feet) of core soils: Albany Sand, Leefield Sand, Leon Fine Sand, Osier Fine Sand, and Alapaha Loamy Sand; and

(C) Currently, or can eventually, support native herbaceous vegetation such as, but not limited to, wiregrass (*Aristida beyrichiana*), redroot (*Lachnanthes caroliniana*), beakrushes (*Rhynchospora* spp.), pitcher plants (*Sarracenia* spp.), sundews (*Drosera* spp.), butterworts (*Pinguicula* spp.), and lilies (*Hymenocallis* spp.).

(iii) Undeveloped lands that contain surface and groundwater of sufficient quality to support all life stages of the Panama City crayfish and the herbaceous vegetation on which they rely, specifically surface waters with:

(A) Oxygen levels that range between 2 and 9 milligrams per liter;

(B) pH levels between 4.1 and 9.2; and

(C) Temperatures between 42 and 94 degrees Fahrenheit (°F) (5 and 34.4 degrees Celsius (°C)), although optimum temperatures are thought to be in the range of 68 to 79 °F (20 to 26 °C).

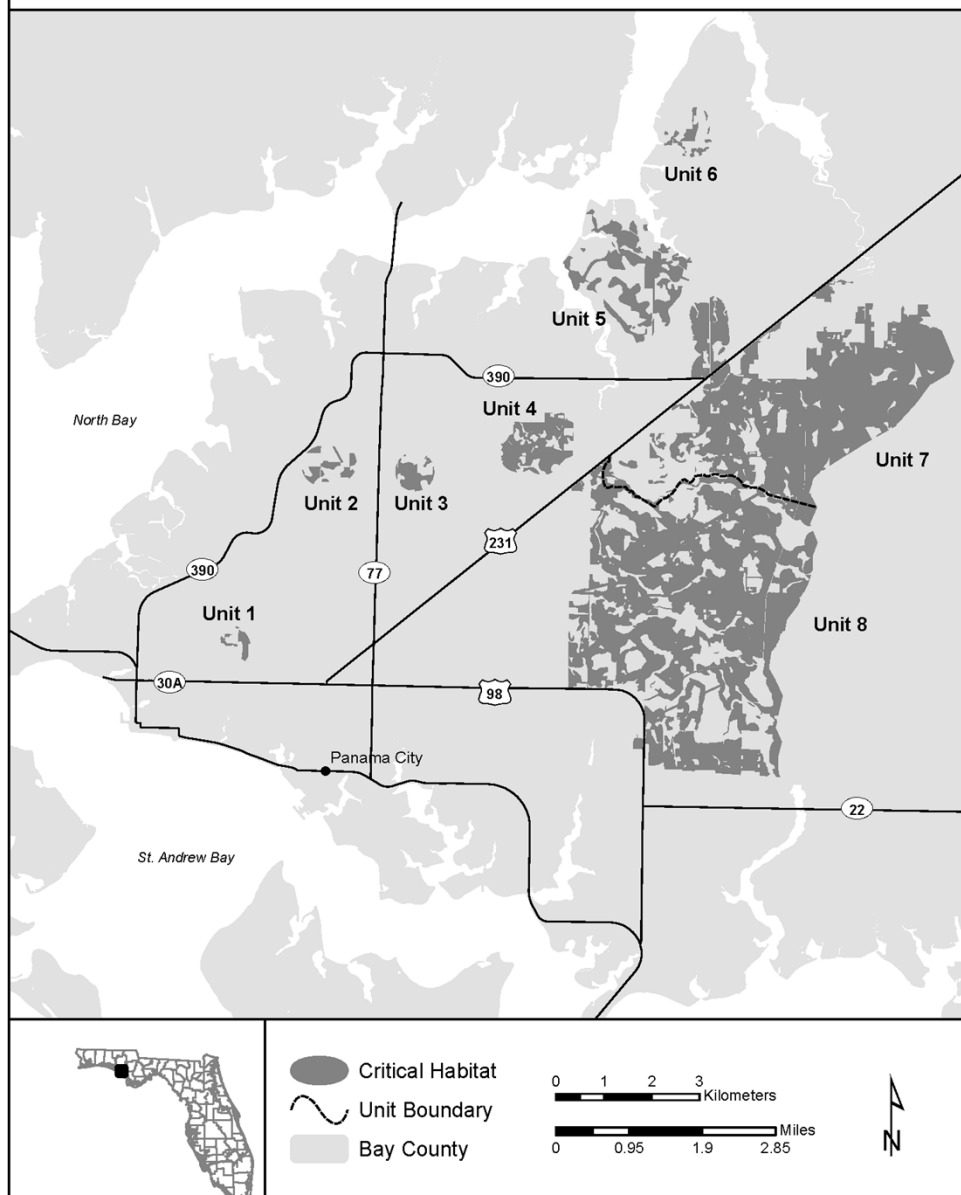
(3) Critical habitat does not include manmade structures (such as buildings, aqueducts, runways, roads, and other paved areas) and the land on which they are located

existing within the legal boundaries on the effective date of the final rule.

(4) *Critical habitat map units.* Data layers defining map units were created based on known occurrences and habitat requirements. Critical habitat units were mapped in ArcMap (ESRI, Inc.) using the U.S. Department of Agriculture, Natural Resources Conservation Service, Soil Survey Geographic Database dataset. The maps in this entry, as modified by any accompanying regulatory text, establish the boundaries of the critical habitat designation. The shapefiles on which each map is based are available to the public at <http://www.regulations.gov> at Docket No. FWS–R4–ES–2020–0137 and at the field office responsible for this designation. You may obtain field office location information by contacting one of the Service regional offices, the addresses of which are listed at 50 CFR 2.2.

(5) *Note:* Index map follows:

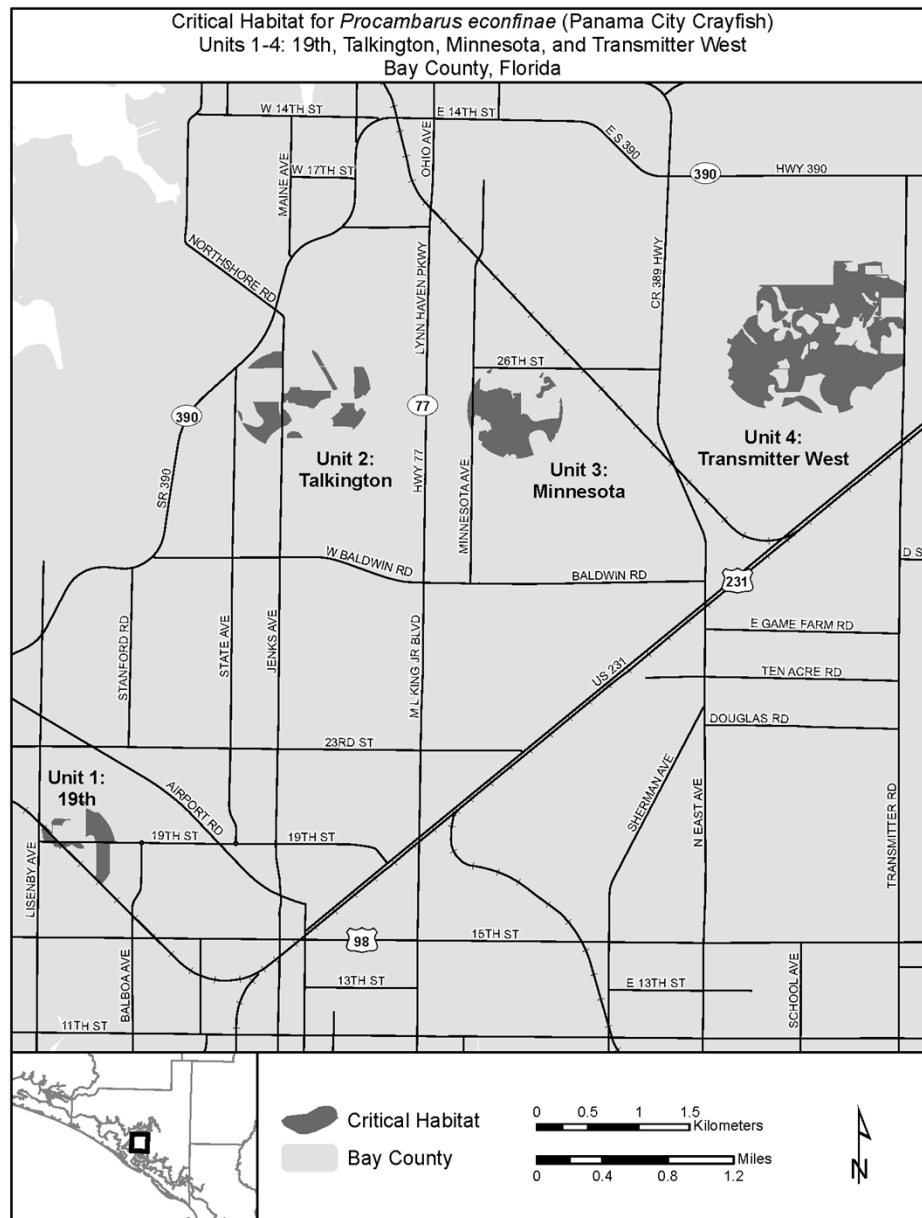
Index Map of Critical Habitat Units for *Procambarus econfinae* (Panama City Crayfish)
Bay County, Florida



(6) Unit 1: 19th Street, Bay County, Florida.

(i) *General description:* Unit 1 consists of 24.3 acres (9.8 hectares) and is composed of lands in State, county, or city ownership (3.7 ac (1.5 ha)), and private ownership (20.6 ac (8.3 ha)).

(ii) Map of Units 1, 2, 3, and 4 follows:



(7) Unit 2: Talkington, Bay County, Florida.

(i) *General description:* Unit 2 consists of 53.1 acres (21.5 hectares) and is composed of lands entirely in private ownership.

(ii) Map of Unit 2 is provided at paragraph (6)(ii) of this entry.

(8) Unit 3: Minnesota, Bay County, Florida.

(i) *General description:* Unit 3 consists of 65.0 acres (26.3 hectares) and is composed of lands in State, county, or city ownership (37.2 ac (15.0 ha)), and private ownership (27.9 ac (11.3 ha)).

(ii) Map of Unit 3 is provided at paragraph (6)(ii) of this entry.

(9) Unit 4: Transmitter West, Bay County, Florida.

(i) *General description:* Unit 4 consists of 248.4 acres (100.5 hectares) and is composed of lands in State, county, or city ownership (4.7 ac (1.9 ha)), and private ownership (243.7 ac (98.6 ha)).

(ii) Map of Unit 4 is provided at paragraph (6)(ii) of this entry.

(10) Unit 5: Deer Point, Bay County, Florida.

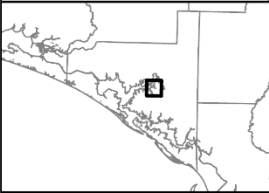
(i) *General description:* Unit 5 consists of 414.6 ac (167.8 ha) and is composed of lands in State, county, or city ownership (0.9 ac (0.4 ha)), and private ownership (413.8 ac (167.5 ha)).

(ii) Map of Units 5 and 6 follows:

Critical Habitat for *Procamburus econfinae* (Panama City Crayfish)
Units 5-6: Deer Point and High Point
Bay County, Florida

The map displays the following features:

- Units:** Unit 5: Deer Point, Unit 6: High Point, and Unit 7: Star.
- Geographic Labels:** North Bay, Deer Point Lake, Resota Beach Rd, Harvard Blvd, 12 Th St, Pipe Line Rd, College Station Rd, Frank Hough Rd, Titus Rd.
- Roads:** CR 2321, CR 2311/CR 2311 HWY, HWY 390, US 231.
- Legend:**
 - Critical Habitat
 - Bay County
- Scale:**
 - Kilometers: 0, 0.45, 0.9, 1.35
 - Miles: 0, 0.35, 0.7, 1.05
- North Arrow:** Indicated by an 'N' with an arrow pointing upwards.
- Inset Map:** Located in the bottom left corner, showing the location of the study area within the state of Florida.



(11) Unit 6: High Point, Bay County, Florida.

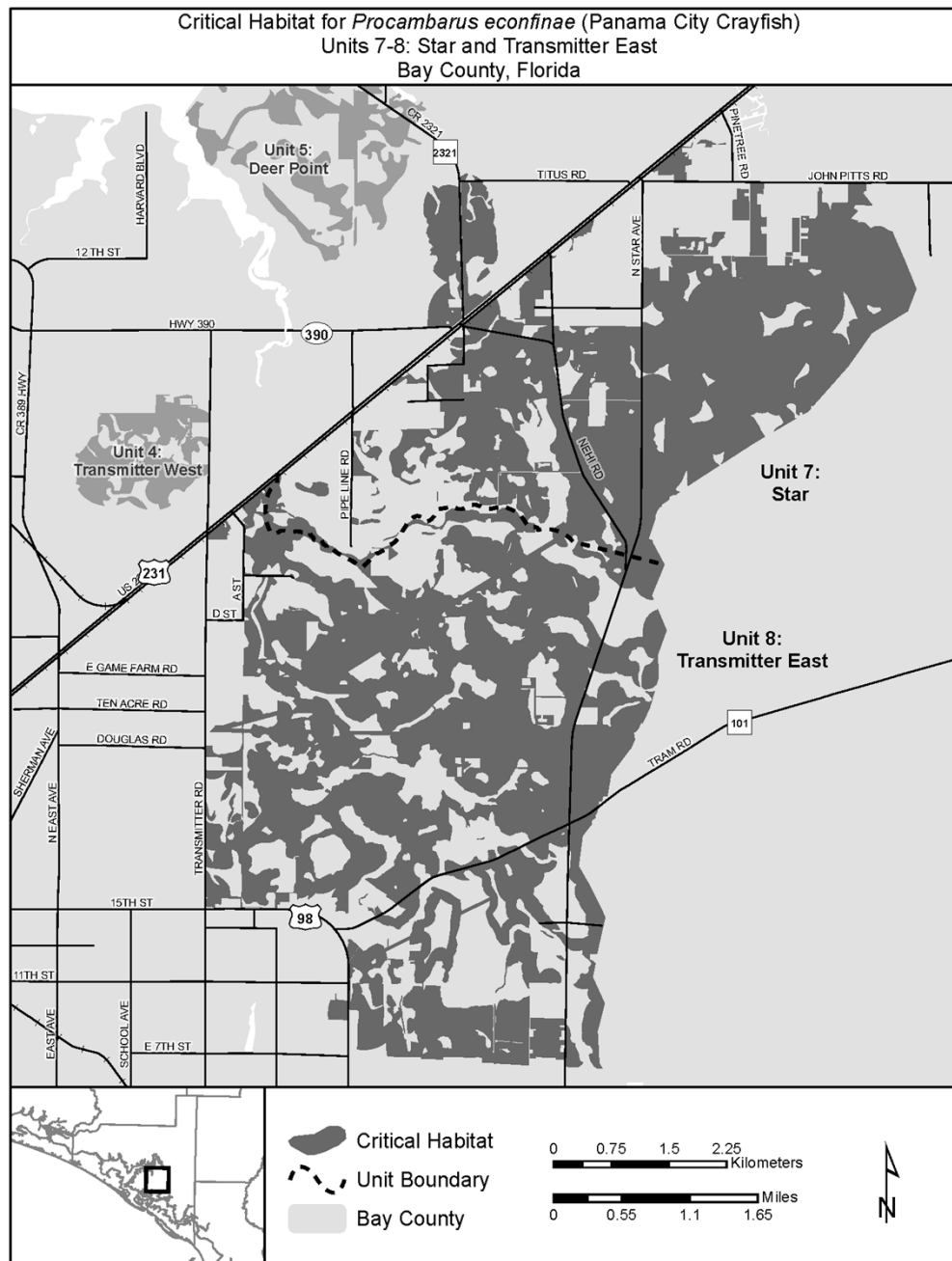
(i) *General description:* Unit 6 consists of 38.4 ac (15.5 ha) and is composed of lands in State, county, or city ownership (0.5 ac (0.2 ha)), and private ownership (37.9 ac (15.3 ha)).

(ii) Map of Unit 6 is provided at paragraph (10)(ii) of this entry.

(12) Unit 7: Star, Bay County, Florida.

(i) *General description:* Unit 7 consists of 2,761.4 ac (1,117.5 ha) and is composed of lands in State, county, or city ownership (9.7 ac (4.0 ha)), and private ownership (2,751.6 ac (1,113.5 ha)).

(ii) Map of Units 7 and 8 follows:



(13) Unit 8: Transmitter East, Bay County, Florida.

(i) *General description:* Unit 8 consists of 3,571.5 ac (1,445.4 ha) and is composed of lands in State, county, or city ownership (82.5 ac (33.4 ha)), and private ownership (3,489.0 ac (1,412.0 ha)).

(ii) Map of Unit 8 is provided at paragraph (12)(ii) of this entry.

* * * * *

Martha Williams

Principal Deputy Director

Exercising the Delegated Authority of the Director

U.S. Fish and Wildlife Service.

[FR Doc. 2021-07243 Filed: 4/14/2021 8:45 am; Publication Date: 4/15/2021]